

Serial No.: 10/766,317
Filing Date: January 27, 2004

REMARKS

Entry of this amendment is respectfully requested. The amendments are made in adherence with 37 C.F.R. § 1.821-1.825. This amendment is accompanied by a floppy disc containing the above named sequences, SEQUENCE ID NUMBERS 1-24, in computer readable form, and a paper copy of the sequence information.

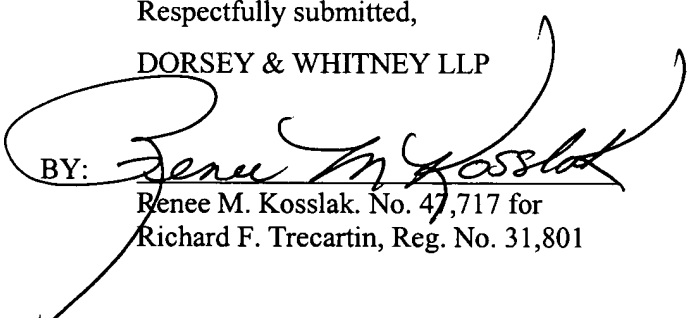
The information contained in the computer readable disc is identical to that of the paper copy in adherence with 37 C.F.R. § 1.821(f). This amendment contains no new matter in adherence with 37 C.F.R. § 1.821(g). Applicant submits that this amendment, the accompanying computer readable sequence listing, and the paper copy thereof serve to place this application in a condition of adherence to the rules 37 C.F.R. § 1.821-1.825.

In addition, the present amendment corrects margins and corrects typographical errors, including erasures, alterations, overwritings, interlineations, and copy marks in Figures 1A-D, 2A-J, 3A-N, 4, 5, 6, and 7 in compliance to 37 C.F.R. §§1.84 and 1.121. Replacement Sheets 1/28-28/28 incorporate corrections, and Annotated Sheets Showing Changes marked in red are attached for the Examiner's convenience. Applicants submit that this amendment is not new matter and request its entry.

Please direct any calls in connection with this application to the undersigned at (415) 781-1989.

Respectfully submitted,
DORSEY & WHITNEY LLP

Dated: 8/11/04
Customer Number: 32940
Dorsey & Whitney LLP
Intellectual Property Department
Four Embarcadero Center, Suite 3400
San Francisco, CA 94111-4187
Telephone: (415) 781-1989
Facsimile: (415) 398-3249

BY: 
Renee M. Kosslok. No. 47,717 for
Richard F. Trecartin, Reg. No. 31,801

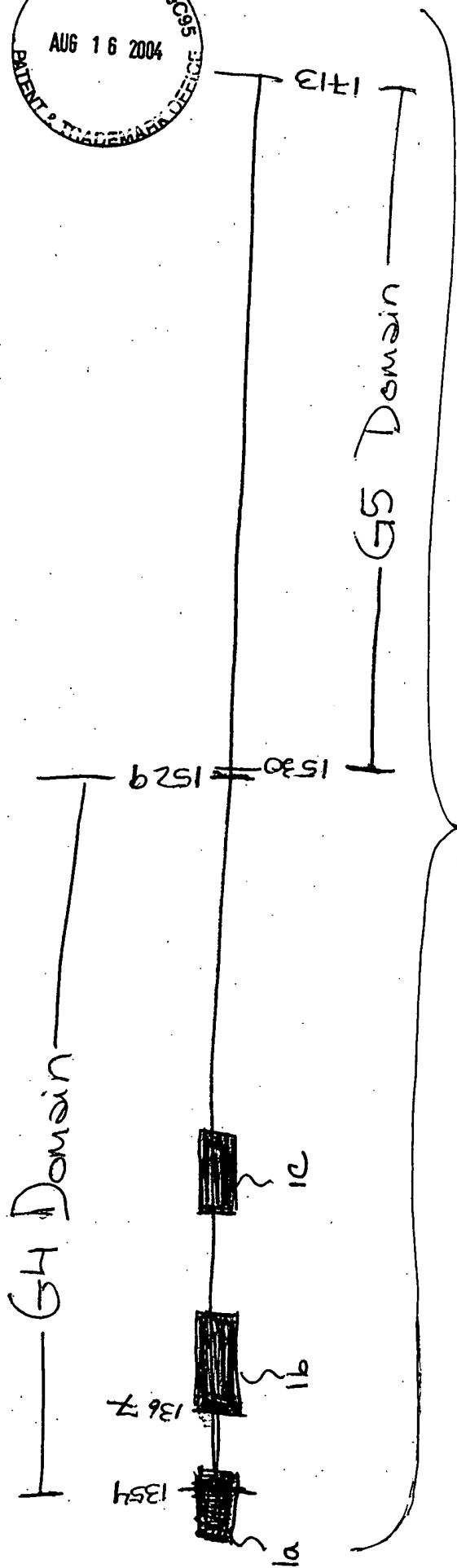
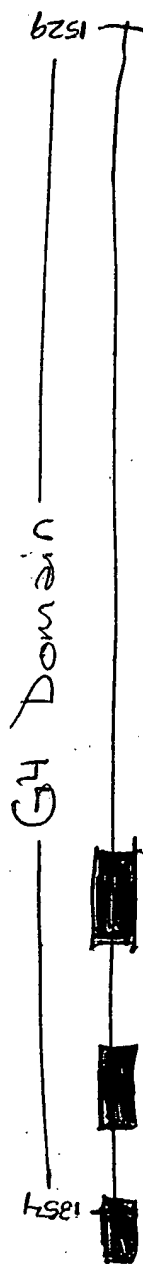


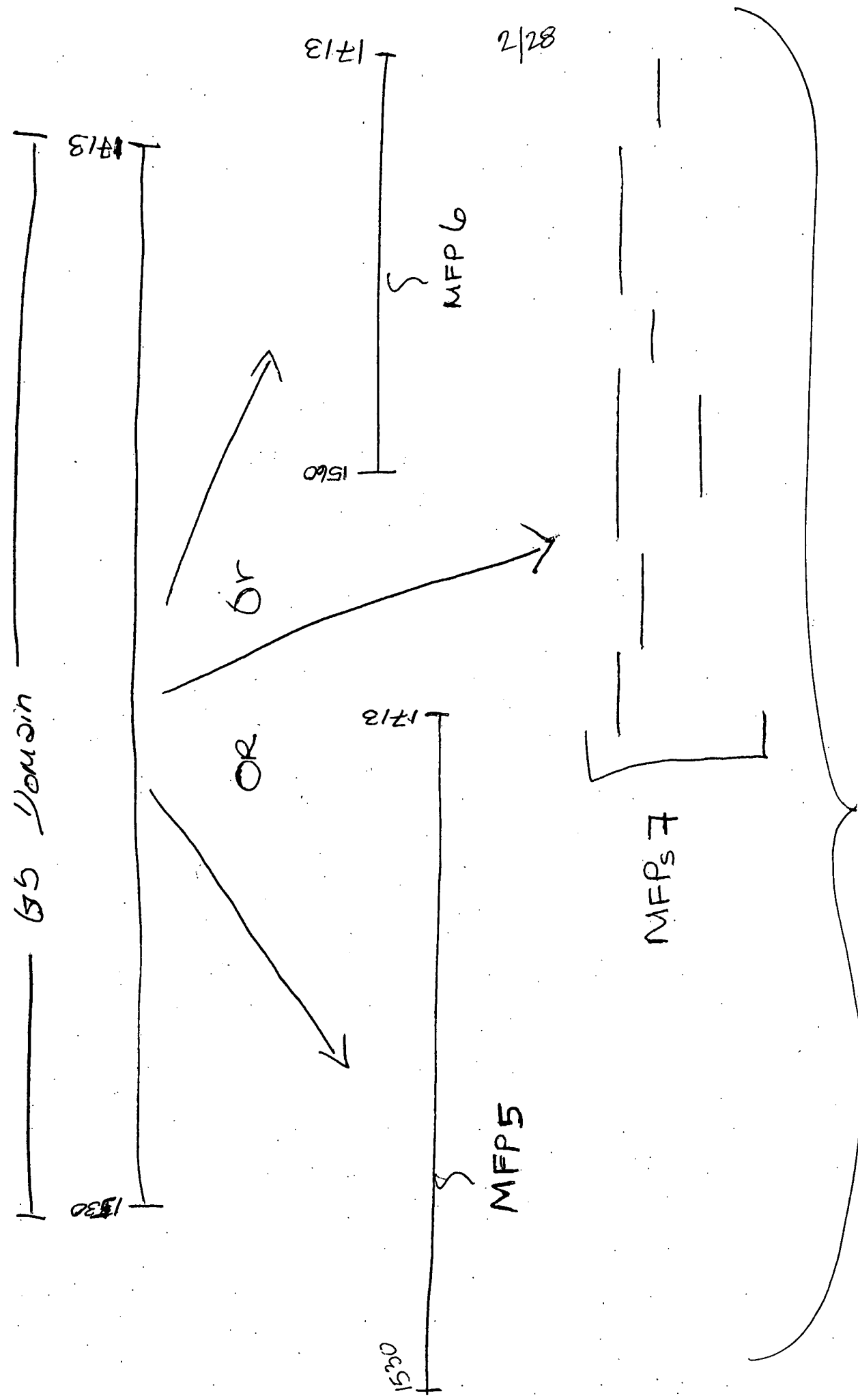
FIG. 1A



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FIG. 1B



2/28

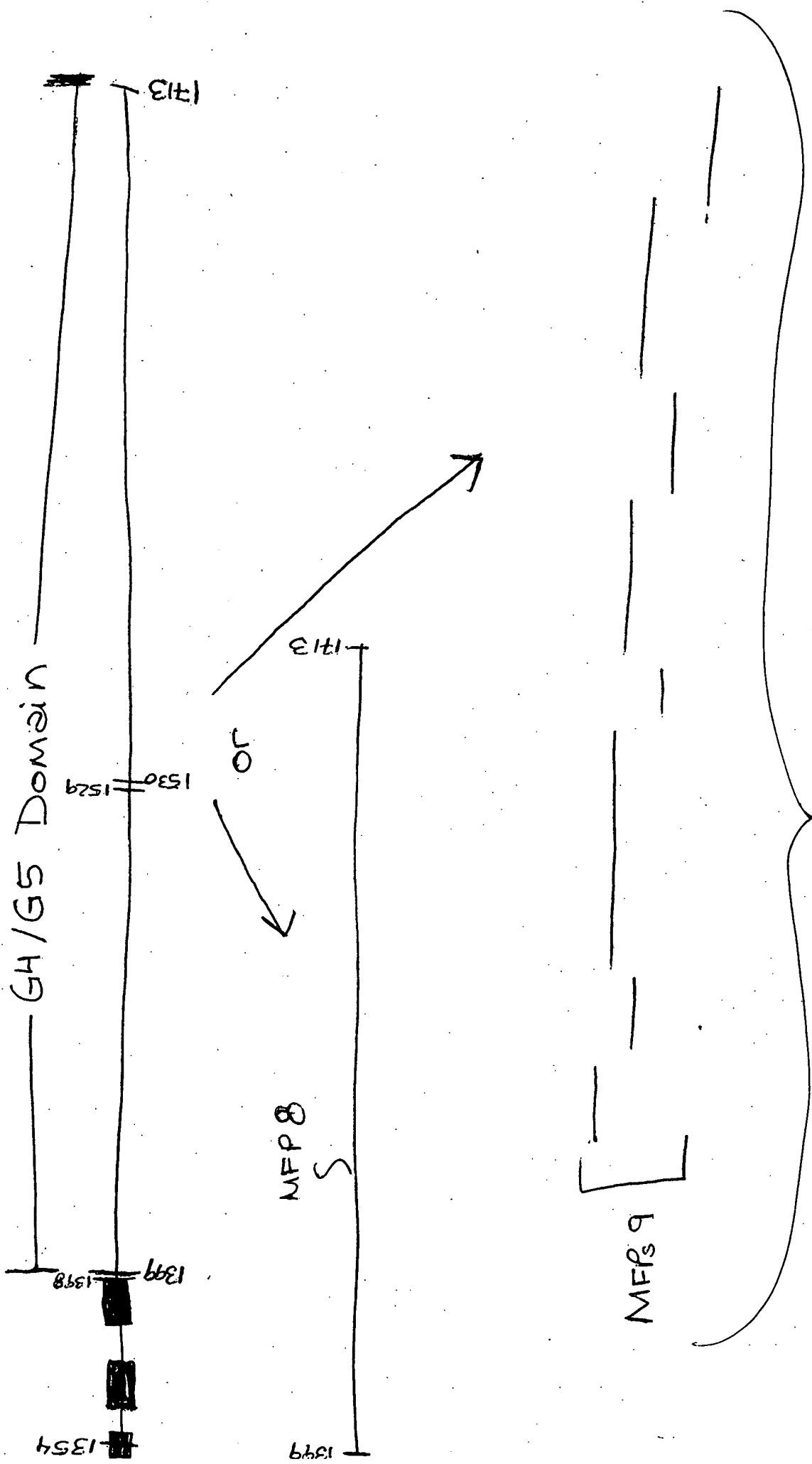


FIG.1D

Figure 1D is now on same page as Figure 1C

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~~FIG. 2A~~

1 atgggatggc tgtggatcct tggggcagcc ctggggcagt gtctgggcta
cagttcacag
61 cagcaaaggg tgccatttct tcagcctccc ggtcaaagtc aactgcaagc
gagttatgtg
121 gagtttagac ccagccaggg ttgtagccct ggatactatc gggatcataa
aggcttgtat
181 accggacggg gtgttccctg caattgcaac ggacattcaa atcaatgcca
ggatggctca
241 ggcatatgtg ttaactgtca gcacaacacc gcgggagagc actgtgaacg
ctgccaggag
301 ggctactatg gcaacgccgt ccacggatcc tgcagggcct gcccatgtcc
tcacactaac
361 agctttgcca ctggctgtgt ggtgaatggg ggagacgtgc ggtgctcctg
caaagctggg
421 tacacaggaa cacagtgtga aaggtgtgca ccgggatatt tcgggaatcc
ccagaaattc
481 ggaggtagct gcccaaccatg cagttgtaac agcaatggcc agctgggcag
ctgtcatccc
541 ctgactggag actgcataaa ccaagaaccc aaagatagca gccctgcaga
agaatgtgat
601 gattgcgaca gctgtgtgat gaccctcctg aacgacctgg ccaccatggg
cgagcagctc
661 cgcttggta agtctcagct gcagggcctg agtgccagcg cagggcttct
ggagcagatg
721 aggcacatgg agaccaggc caaggacctg aggaatcagt tgctcaacta
ccgttctgcc
781 atttcaaac atggatcaaa aatagaaggc ctggaaagag aactgactga
tttgaatcaa
841 gaatttgaga ctttgcaaga aaaggctcaa gtaaattcca gaaaagcaca
aacattaaac
901 aacaatgtta atcgggcaac acaaagcgca aaagaactgg atgtgaagat
taaaaatgtc
961 atccggaatg tgcacattct tttaaagcag atctctggga cagatggaga
gggaaacaac
1021 gtgccttcag gtgacttttc cagagagtgg gctgaagccc agcgcatgat
gaggggaactg
1081 cggaacagga actttggaaa gcacctcaga gaagcagaag ctgataaaag
ggagtcgcag
1141 ctcttgctga accggataag gacctggcag aaaaccacc agggggagaa
caatgggctt
1201 gctaacagta tccgggattc tttaaatgaa tacgaagcca aactcagtga
ccttcgtgct
1261 cggctgcagg aggcagctgc ccaagccaag caggcaaag gcttgaacca
agaaaacgag

FIG. 2A-1

FIG. 2A (CONT)

1321 agagcttttg gagccattca gagacaagtg aaagaaataa attccctgca
gagtgatttc
1381 accaagtatc taaccactgc agactcatct ttgttgcaaa ccaacattgc
gctgcagctg
1441 atggagaaaa gccagaagga atatgaaaaa ttagctgcca gtttaaata
agcaagacaa
1501 gaactaagtg acaaagtaag agaactttcc agatctgctg gcaaaacatc
ccttggtggag
1561 gaggcagaaa agcacgcgcg gtccttacia gagctggcaa agcagctgga
agagatcaag
1621 agaaacgcca gcggggatga gctggtgcgc tgtgctgtgg atgccgccac
cgctacgag
1681 aacatcctca atgccatcaa agcggccgag gacgcagcca acagggtgc
cagtgcattc
1741 gaatctgccc tccagacagt gataaaggaa gatctgcaa gaaaagctaa
aacctgagt
1801 tccaacagtg ataaactgtt aaatgaagcc aagatgacac aaaagaagct
aaagcaagaa
1861 gtcagtccag ctctcaacia cctacagcaa accctgaata ttgtgacagt
tcagaaagaa
1921 gtgatagaca ccaatctcac aactctccga gatggtcttc atgggataca
gagaggtgat
1981 attgatgcta tgatcagtag tgcaaagagc atggtcagaa aggccaacga
catcacagat
2041 gaggttctgg atgggctcaa ccccatccag acagatgtgg aaagaattaa
ggacacctat
2101 gggaggacac agaacgaaga cttcaaaaag gctctgactg atgcagataa
ctcgggtgaat
2161 aagttaacca acaaactacc tgatctttgg cgcaagattg aaagtatcaa
ccaacagctg
2221 ttgcccttgg gaaacatctc tgacaacatg gacagaatac gagaactaat
tcagcaggcc
2281 agagatgctg ccagtaaggt tgctgtcccc atgaggttca atggtaaatc
tggagtcgaa
2341 gtccgactgc caaatgacct ggaagatttg aaaggatata catctctgtc
cttgtttctc
2401 caaaggccca actcaagaga aaatgggggt actgagaata tgtttgtgat
gtaccttgga
2461 aataaagatg cctcccgga ctacatcggc atggcagttg tggatggcca
gctcacctgt
2521 gtctacaacc tgggggaccg tgaggctgaa ctccaagtgg accagattct
gaccaagagt
2581 gagactaagg aggcagttat ggatcgggtg aaatttcaga gaatttatca
gtttgcaagg

FIG. 2A (CONT)

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to fit
in
FIG. 2A2

2641 cttaattaca ccaaaggagc cacatccagt aaaccagaaa caccgaggat
ctatgacatg
2701 gatggtagaa atagcaatac actccttaat ttggatcctg aaaatgttgt
attttatgtt
2761 ggaggttacc cacctgattt taaacttccc agtcgactaa gtttccctcc
atacaaagg
2821 tgtattgaat tagatgacct caatgaaaat gttctgagct tgtacaactt
caaaaaaaca
2881 ttcaatctca acacaactga agtggagcct tgtagaagga ggaaggaaga
gtcagacaaa

FIG. 2A-1

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Now
known
as
FIG. 2A2

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tcccatccca
3001 acctttggac agacaattca gaccaccgtg gatagaggct tgctgttctt
tgcagaaaac
3061 ggggatcgtc tcatatctct aaatatagaa gatggcaagc tcatggtgag
atacaaactg
3121 aattcagagc taccaaaaga gagaggagt ggagacgcca taaacaacgg
cagagaccat
3181 tcgattcaga tcaaaattgg aaaactccaa aagcgtatgt ggataaatgt
ggacgttcaa
3241 aacactataa ttgatggtga agtatttgat ttcagcacat attatctggg
aggaattcca
3301 attgcaatca gggaaagatt taacatttct acgctgctt tccgaggctg
catgaaaaat
3361 ttgaagaaaa ccagtgggtg cgttagattg aatgatactg tgggagtaac
caaaaagtgc
3421 tcggaagact ggaagcttgt gcgatctgcc tcattctcca gaggaggaca
attgagtttc
3481 actgatttgg gcttaccacc tactgaccac ctccaggcct catttggatt
tcagacctt
3541 caaccocagt gcatattatt agatcatcag acatggacaa ggaacctgca
ggtcactctg
3601 gaagatgggt acattgaatt gagcaccagc gatagcggcg gcccaatttt
taaattctcca
3661 cagacgtata tggatggttt actgcattat gtatctgtaa taagcgacaa
ctctggacta
3721 cggcttctca tcgatgacca gcttctgaga aatagcaaaa ggctaaaaca
catttcaagt
3781 tcccggcagt ctctgcgtct gggcgggagc aattttgagg gttgtattag
caatgttttt
3841 gtccagaggt tatcactgag tcctgaagtc ctagatttga ccagtaactc
totcaagaga
3901 gatgtgtccc tgggaggctg cagtttaaac aaaccacctt ttctaattgt
gcttaaagg

FIG. 2A (CONT)

3961 tctaccaggt ttaacaagac caagactttt cgtatcaacc agctgttgca
ggacacacca
4021 gtggcctccc caaggagcgt gaaggtgtgg caagatgctt gctcaccact
tcccaagacc
4081 caggccaatc atggagccct ccagtttggg gacattccca ccagccactt
gctattcaag
4141 cttcctcagg agctgctgaa acccaggtca cagtttgctg tggacatgca
gacaacatcc
4201 tccagaggac tgggtgtttca cacgggcact aagaactcct ttatggctct
ttatctttca
4261 aaaggacgtc tggctctttgc actggggaca gatgggaaaa aattgaggat
caaaagcaag
4321 gagaaatgca atgatgggaa atggcacacg gtgggtgtttg gccatgatgg
ggaaaagggg
4381 cgcttggttg tggatggact gagggcccgg gaggggaagtt tgccctggaaa
ctccaccatc
4441 agcatcagag cgccagttta cctgggatca cctccatcag ggaaacaaaa
gagcctcccc
4501 acaaacagct ttgtgggatg cctgaagaac tttcagctgg attcaaaacc
cttgataacc
4561 ccttcttcaa gcttcggggg gtcttcctgc ttgggtggtc ctttgagaa
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gccagaattt
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catcggaagt
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ctctatggac
4801 agtggggcag gtgggacctc aacgtcggtc acaccaaagc agtctctgtg
tgatggacag
4861 tggcactcgg tggcagtcac cataaaacaa cacatcctgc acctggaact
ggacacagac
4921 agtagctaca cagctggaca gatccccttc ccacctgcca gcaactcaaga
gccactacac
4981 cttggagggtg ctccagccaa tttgacgaca ctgaggatcc ctgtgtggaa
atcattcttt
5041 ggctgtctga ggaatattca tgtcaatcac atccctgtcc ctgtcactga
agccttgaa
5101 gtccaggggc ctgtcagtct gaatggttgt cctgaccagt aaccaagcc
tatttcacag
5161 caaggaaatt caccttcaaa agcactgatt acccaatgca cctccctccc
cagctcgaga
5221 tcattcttca attaggacac aaaccagaca ggtttaatag cgaatcta
tttgaattct

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AS
FIG. 2A-2

~~FIG. 2A (CONT)~~

5281 gaccatggat acccatcact ttggcattca gtgctacatg tgtattttat
ataaaaaatcc
5341 catttcttga agataaaaaa attgttattc aaattgttat gcacagaatg
tttttggttaa
5401 tattaatttc cactaaaaaa ttaaattgtct ttt

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to fit
as
FIG.-2A-2

FIG.-2A-2

~~FIG. 2B~~

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MGWLWIFGAALGQCLGYSSQQQRVPFLQPPGQSQLQASYVEFRP

SQGCSPGYRDKGLYTGRVCPCNCNGHSNQCQDGSIGVCNCQHNTAGEHCERCQEGY
YGNVHGSCRACPCPHTNSFATGCVVNGDVRCCKAGYTGTQCERCAPGYFGNPQKF
GGSCQPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDSCVMTLLNDLATMGE
QLRLVKSQLOGLSASAGLLEQMRHMETQAKDLRNQLLNYSASISNHGSKIEGLERELT
DLNQEFETLQEKAVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRNVHILLKQISGT
DGEENNVPSGDFSREWAEAQRMMRELRNRNFGKHLREAEADKRESQLLLNRIRTWQKT
HQGENNGLANSIRDSLNEYEAKLSDLRLRLQEAQAQKQANGLNQENERALGAIQRQV
KEINSLQSDFTKYLTTADSSLLQTNIALQLMEKSQKEYEKLAAASLNEARQELSDKVRE
LSRSAGKTSVVEEAKEHARSLQELAKQLEEIKRNASGDELVRCAVDAATAYENILNAI
KAAEDAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMTQKKLKQEVSPA
LNNLQQTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSMVRKANDITDEV
LDGLNPIQTDVERIKDTYGRTQNEDEFKALTDADNSVNKLTKLPDLWRKIESINQQL
LPLGNISDNMDRIRELIQQARDAASKVAVPMRFNGKSGVEVRLPNDLEDLKGYTSLSL
FLQRPNSRENGGTENMFVYLGKNDASRDYIGMAVVDGQLTCVYNLGDREAELQVDQI
LTKSETKEAVMDRVKFQRIYQFARLNYTKGATSSKPETPGVYDMDGRNSNTLLNLDPE
NVVFYVGGYPPDFKLPSRLSFPPYKGCIELDDLNNVLSLYNFKKTFNLNTTEVEPCR
RRKEESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAENGDRFISLNIE
DGKLMVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINVDVQNTIIDGEV

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as FIG.-2B

~~FIG. 2B~~ (CONT)

FDFSTYYLGGIPIAIRERFNISTPAFRGCMKNLKKTSQVVRNLNDTVGVTKKCSWDWL
VRSASFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQWTRNLQVTLEDGY
IELSTSDSGGPIFKSPQTYMDGLLHYVSVISDNSGLRLLIDDQLLRNSKRLKHISRR
QSLRLGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKRQVSLGGCSLNKPPFLMLLLKG
STRFNKTKTFRINQLLQDTPVASPRSVKQWQDACSPKPTQANHGALQFGDIPTSHLL
FKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNFSMALYLSKGRVLFALGTDGKKLR
IKSKEKCNDGKWHTVVFGHDGEKGRVVDGLRAREGSLPGNSTISIRAPVYLGSPPSG
KPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYFSEEGGHVVLAH
SVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHLVCVYLEAGKVTASMDSGAGGTSTSV
TPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPASTQEPLHLGGAPANL
TTLRIPVWKSFFGCLRNHVNHI PVPVTEALEVQGPVSLNGCPDQ

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FIG. 2B

FIG. 2B

~~FIG. 2C~~

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1 gcaggtccgg gaggcgcagg cggagagcgg cgggtgcccc
gagccctct gcggacggct
61 caggcgggag gaccccgccg ggctggatgg cggcggccgc gcggcctcgg
ggtcgggcac
121 tggggccagt actgccgccg acgccgtgc tcctgctggt actgcgggtg
ctgccagcct
181 gcggggcgac cgctcgggat cccggggccg cggccgggct cagccttcac
ccgacttact
241 tcaacctggc cgaggcggcg aggatttggg ccaccgccac ctgcggggag
aggggacccg
301 gcgaggggag gcccagccc gagctctact gcaagttggt cgggggcccc
accgccccag
361 gcagcggcca caccatccag ggccagttct gtgactattg caattctgaa
gacccagga
421 aagcacatcc tgtcaccaat gccatcgatg gatctgaacg ttggtggcaa
agcctcccc
481 tgtcctcagg cacacagtac aacagagtca acctcacctt ggatctgggg
cagctcttcc

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as
FIG. 2C-1

FIG. 2C (CONT)

541 atgtggccta tattttaate aaatttgcaa attctcctcg ccctgatctt
 tgggtcttgg
 601 aaagatctgt agactttgga agcacctact caccatggca atattttgct
 cattctaaag
 661 tagactgttt aaaagaattt gggcgggagg caaatatggc tgtcaccg
 gatgatgatg
 721 tactttgtgt tactgaatat tcccgtattg tacctttgga aaatggtgag
 gttgtggtgt
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 ctgagggagt
 841 ttaccaaggc aacaaacatc cgcttgcggt ttcttagaac caatacgctt
 ctgagacacc
 901 tcatctccaa agcccagcga gatccaactg tcaactcggcg gtattattac
 agcataaagg
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 aatataaaca
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 acgtgtgatc
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 cagagccacg
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 ccagatgttg
 1201 agcggcagca ggcaagcttg aatacccagg gcatctatgc tgggtggagg
 gtctgcatta
 1261 actgtcagca caacacagct ggagtaaact gtgaacagtg tgctaagggc
 tattaccgce
 1321 cttatgggggt tccagtggat gccctgatg gctgcatccc ctgcagctgt
 gaccctgagc
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 agctcagtga
 1741 ctggacagtg tgaatgtcgg ccaggagtta caggacagcg gtgtgacagg
 tgtctctcag
 1801 gagcttatga tttccccac tgccaagggt ccagcagtgc ttgtgacca
 gctggtacca

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 as
 FIG. 2C1

FIG. 2C (CONT)

1861 tcaactccaa tttggggtat tgccaatgca agcttcatgt tgaaggctct
acttgtagcc
1921 gctgcaaact gttatattgg aatctggaca aagaaaaccc cagtggatgt
tcagaatgca
1981 agtgccataa ggcgggaaca gtgagtggaa ctggagagtg taggcaggga
gatgggtgact
2041 gtcactgcaa gtcccatgtg ggtggcgatt cctgcgacac ctgtgaagat
ggatattttg
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ggtggggcat
2161 tgtcctccat gtgcagtggg cctcgggag tgtgccagtg ccgagagcat
gtcgtgggaa
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2281 agattgaaga cggcagcaca cctaattggga gagaccttcg atttggattt
gatccgctgg
2341 catttcctga gtttagctgg agaggatatg cccaaatgac ctcagtacag
aatgatgtaa
2401 gaataacatt gaatgtaggg aagtcaagtg gtccttgtt tcgtgttatt
ctgagatacg
2461 ttaaccctgg aactgaagca gtatctggcc atataactat ttatccatcc
tggggtgctg
2521 ctcaaagcaa agagatcatc ttctgcccga gtaaggagcc agcctttgtc
actgtccctg
2581 gaaatgggtt tgcagacca ttttcaatca caccaggaat atgggttgct
tgtattaagg
2641 cagaaggagt ccttctggat tacctggtgc tgctcccag ggactactat
gaagcctctg
2701 tactgcagct gccagtcaca gaaccatgtg cctacgcagg acctcccaa
gaaaattgct
2761 tactctacca gcatttgcca gtgaccagat tcccctgtac cctggcttgt
gaggccagac
2821 acttctgct tgatggggag ccaagaccg tggcagtgag gcagcccaca
cctgcacacc
2881 ctgtcatggt ggacctcagc gggagagagg tggaattgca tctgcggctg
cgcacccac
2941 aggttggcca ctacgtggtt gtggtcgagt attccacgga ggcagctcag
ctgtttgtgg
3001 ttgatgtgaa tgtgaagagc tccgggtctg ttctggcagg ccaggtgaac
atttacagct
3061 gcaactacag tgttctctgc cggagtgtg tgattgatca catgagccgc
atcgccatgt
3121 atgagctatt ggcagatgca gacattcagc tcaagggaca catggcccga
ttccttctgc

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FIG. 2C-1

FIG. 2C-1

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FIG. 2C-2

~~FIG. 2C~~ (CONT)

3181 atcaagtttg tatcatacct attgaagaat tctcagctga gtatgtgaga
ccacaagtcc
3241 actgcattgc cagttatggg cgatttgtca atcaaagtgc cacctgtgtc
tccttgcccc
3301 atgaaactcc tccaacagca ttaatttttg atgttctaag tggcaggcct
ttccctcacc
3361 tgccccagca gtcgtcacct tctgttgatg ttcttcttg ggtcaccttg
aaggcaccgc
3421 agaatcaagt gaccctgaga ggacgtgtac cacacctggg ccgatacgtc
tttgtcatcc
3481 attttttacca agcagcgcac ccgacgtttc ccgcgcaggt gtcggtggat
ggcgggtggc
3541 cacgggcagg ctcttccat gcctcttttt gccccatgt gcttggtgc
cgggatcaag
3601 tgattgccga aggccagatt gagtttgaca tctcagagcc tgaagtggc
gcaactgtga
3661 aggttccaga aggaaagtcc ttggtttttg tccgtgttct agtgggtgcct
gcagaaaact
3721 atgactacca aatacttcac aaaaaatcca tggacaagtc actcgagttt
atcaccaatt
3781 gtggaaaaaa cagcttttac cttgaccccc agacagcctc cagattctgt
aagaattccg
3841 ccaggtcctt ggtggccttt taccacaagg gcgccctgcc ttgtgagtgc
caccctactg
3901 gggccaccgg ccctcactgc agccctgagg gtgggcagtg cccatgccag
cccaacgtca
3961 tcgggcgga gtgcaccgc tgtgcaacag gccactacgg attcccacgc
tgcaagccgt
4021 gcagctgtgg tcggcgccct tgtgaagaga tgacggggca gtgccgtgc
cctccccga
4081 cggtcaggcc ccagtgtgag gtgtgtgaga cacactcatt cagcttccac
cccatggccg
4141 gctgcgaagg ctgcaactgt tccaggagg gcaccatcga ggctgccatg
ccggagtgtg
4201 accgggacag cgggcagtg agatgcaagc ccagaatcac agggcggcag
tgtgaccgat
4261 gtgcttccgg gttttaccgc tttcctgagt gtgttccctg caattgcaac
agagatggga
4321 ctgagccagg agtgtgtgac ccagggaccg gggcttgcct ctgcaaggaa
aatgtagaag
4381 gcacagagtg taatgtgtgt cgagaaggct cattccattt ggaccacgcc
aatctcaagg
4441 gttgtaccag ctgtttctgt tttggagtaa ataataatg tcacagctca
cataagcgaa

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as

FIG. 2C2

FIG. 2C (CONT)

4501 ggactaagtt tgtggatatg ctgggctggc acctggagac agcagacaga
gtggacatcc
4561 ctgtctcttt caaccaggc agcaacagta tgggtggcgga tctccaggag
ctgcccgcga
4621 ccattccacag cgcgtcctgg gtcgcacca cctcctacct gggggacaag
gtttcttcat
4681 atggtgggta cctcacttac caagccaagt cctttggctt gcctggcgac
atggttcttc
4741 tggaaaagaa gccggatgta cagctcactg gtcagcacat gtccatcatc
tatgaggaga
4801 caaacacccc acggccagac cggctgcac atggacgagt gcacgtggtc
gagggaaact
4861 tcagacatgc cagcagccgt gcccagtgct ctagggagga gctgatgaca
gtgctgtcta
4921 gactggcaga tgtgcgcac caaggcctct acttcacaga gactcaaagg
ctcaccctga
4981 gcgaggtggg gctagaggaa gcctctgaca caggaagtgg gcgcatagca
cttgctgtgg
5041 aaatctgtgc ctgccccct gcctacgctg gtgactcttg tcagggttgt
agccctggat
5101 actatcggga tcataaaggc ttgtataccg gacggtgtgt tccttgcaat
tgcaacggac
5161 attcaaata atgccaggat ggctcaggca tatgtgttaa ctgtcagcac
aacaccggg
5221 gagagcactg tgaacgctgc caggagggct actatggcaa cgcgtccac
ggatcctgca
5281 gggcctgccc atgtcctcac actaacagct ttgccactgg ctgtgtgggtg
aatgggggag
5341 acgtgcggtg ctctgcaaa gctgggtaca caggaacaca gtgtgaaagg
tgtgcaccgg
5401 gatatttcgg gaatccccag aaattcggag gtagctgcca accatgcagt
tgtaacagca
5461 atggccagct gggcagctgt catccctga ctggagactg cataaaccaa
gaacccaaag
5521 atagcagccc tgcagaagaa tgtgatgatt gcgacagctg tgtgatgacc
ctcctgaacg
5581 acctggccac catgggcgag cagctccgcc tggtaagtc tcagctgcag
ggcctgagt
5641 ccagcgcagg gcttctggag cagatgaggc acatggagac ccaggccaag
gacctgagga
5701 atcagttgct caactaccgt tctgccattt caaatcatgg atcaaaaata
gaaggcctgg
5761 aaagagaact gactgatttg aatcaagaat ttgagacttt gcaagaaaag
gctcaagtaa

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as

FIG.-2C2

~~FIG. 2C (CONT.)~~

5821 attccagaaa agcacaaca ttaaacaaca atgttaatcg ggcaacacaa
agcgcaaaaag
5881 aactggatgt gaagattaaa^{8/28} aatgtcatcc ggaatgtgca cattctttta
aagcagatct
5941 ctgggacaga tggagaggga aacaacgtgc cttcaggtga cttttccaga
gagtgggctg
6001 aagcccagcg catgatgagg gaactgcgga acaggaactt tggaaagcac
ctcagagaag
6061 cagaagctga taaaaggag tgcagctct tgctgaaccg gataaggacc
tggcagaaaa
6121 cccaccaggg ggagaacaat gggcttgcta acagtatccg ggattcttta
aatgaatag
6181 aagccaaact cagtgcactt cgtgctcggc tgcaggaggc agctgcccaa
gccaagcagg
6241 caaatggctt gaaccaagaa aacgagagag ctttgggagc cattcagaga
caagtgaag
6301 aaataaattc cctgcagagt gatttcacca agtatctaac cactgcagac
tcatctttgt
6361 tgcaaaccaa cattgcgctg cagctgatgg agaaaagcca gaaggaatat
gaaaaattag
6421 ctgccagttt aaatgaagca agacaagaac taagtgacaa agtaagagaa
ctttccagat
6481 ctgctggcaa aacatccctt gtggaggagg cagaaaagca cgcgcggtcc
ttacaagagc
6541 tggcaaagca gctggaagag atcaagagaa acgccagcgg ggatgagctg
gtgcgctgtg
6601 ctgtggatgc cgccaccgcc tacgagaaca tcctcaatgc catcaaagcg
gccgaggagc
6661 cagccaacag ggctgccagt gcatctgaat ctgccctcca gacagtgata
aaggaagatc
6721 tgccaagaaa agctaaaacc ctgagttcca acagtgataa actgttaa
gaagccaaga
6781 tgacacaaaa gaagctaaag caagaagtca gtccagctct caacaaccta
cagcaaacc
6841 tgaatattgt gacagttcag aaagaagtga tagacaccaa tctcacaact
ctccgagatg
6901 gtcttcatgg gatacagaga ggtgatattg atgctatgat cagtagtgca
aagagcatgg
6961 tcagaaaggc caacgacatc acagatgagg ttctggatgg gctcaacccc
atccagacag
7021 atgtggaaag aattaaggac acctatggga ggacacagaa cgaagacttc
aaaaaggctc
7081 tgactgatgc agataactcg gtgaataagt taaccaacaa actacctgat
ctttggcgca

FIG. 2C-2

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FIG. 2C-2

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FIG. 2C-3

~~FIG. 2C (CONT)~~

7141 agattgaaag tatcaaccaa cagctgttgc ccttgggaaa catctctgac
aacatggaca
7201 gaatacgaga actaattcag caggccagag atgctgccag taaggttgct
gtccccatga
7261 ggttcaatgg taaatctgga gtcgaagtcc gactgccaaa tgacctggaa
gatttgaaag
7321 gatatacatc tctgtccttg tttctccaaa ggcccaactc aagagaaaat
gggggtactg
7381 agaatatggt tgtgatgtac cttggaaata aagatgcctc ccgggactac
atcggcattg
7441 cagttgtgga tggccagctc acctgtgtct acaacctggg ggacctgag
gctgaactcc
7501 aagtggacca gatcttgacc aagagtgaga ctaaggaggc agttatggat
cgggtgaaat
7561 ttcagagaat ttatcagttt gcaaggctta attacaccaa aggagccaca
tccagtaaac
7621 cagaaacacc cggagtctat gacatggatg gtagaaatag caatacactc
cttaatttgg
7681 atcctgaaaa tgttgtattt tatgttggag gttaccaccc tgattttaaa
cttcccagtc
7741 gactaagttt cctccatac aaagggttga ttgaattaga tgacctcaat
gaaaatgttc
7801 tgagcttgta caacttcaaa aaaacattca atctcaacac aactgaagtg
gagccttgta
7861 gaaggaggaa ggaagagtca gacaaaaatt attttgaagg tacgggctat
gctcgagttc
7921 caactcaacc acatgctccc atcccaacct ttggacagac aattcagacc
accgtggata
7981 gaggcttgct gttctttgca gaaaacgggg atcgcttcat atctctaaat
atagaagatg
8041 gcaagctcat ggtgagatac aaactgaatt cagagctacc aaaagagaga
ggagttggag
8101 acgccataaa caacggcaga gaccattcga ttcagatcaa aattggaaaa
ctccaaaagc
8161 gtatgtggat aaatgtggac gttcaaaaca ctataattga tgggtgaagta
tttgatttca
8221 gcacatatta tctgggagga attccaattg caatcaggga aagatttaac
atttctacgc
8281 ctgctttccg aggctgcatg aaaaatttga agaaaaccag tgggtgctgtt
agattgaatg
8341 atactgtggg agtaaccaa aagtgtcgg aagactggaa gcttgtgcga
tctgcctcat
8401 tctccagagg aggacaattg agtttcaactg atttgggctt accacctact
gaccacctcc

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as

FIG. 2C3

FIG. 2C (CONT)

8461 aggcctcatt tggatttcag acctttcaac ccagtggcat attattagat
catcagacat
8521 ggacaaggaa cctgcaggtc actctggaag atggttacat tgaattgagc
accagcgata
8581 gcggcagccc aattttttaa tctccacaga cgtatatgga tggtttactg
cattatgtat
8641 ctgtaataag cgacaactct ggactacggc ttctcatcga tgaccagctt
ctgagaaata
8701 gcaaaaggct aaaacacatt tcaagttccc ggcagtctct gcgtctgggc
gggagcaatt
8761 ttgagggttg tattagcaat gtttttgtcc agaggttatc actgagtcct
gaagtcctag
8821 atttgaccag taactctctc aagagagatg tgtccctggg aggctgcagt
ttaaacaac
8881 caccttttct aatgttgctt aaaggttcta ccaggtttaa caagaccaag
acttttcgta
8941 tcaaccagct gttgcaggac acaccagtgg cctccccaag gagcgtgaag
gtgtggcaag
9001 atgcttgctc accacttccc aagaccagc ccaatcatgg agccctccag
tttggggaca
9061 ttcccaccag ccacttgcta ttcaagcttc ctccaggagct gctgaaaccc
aggtcacagt
9121 ttgctgtgga catgcagaca acatcctcca gaggactggg gtttcacacg
ggcactaaga
9181 actcctttat ggctctttat ctttcaaaag gacgtctggg ctttgcactg
gggacagatg
9241 ggaaaaaatt gaggatcaaa agcaaggaga aatgcaatga tgggaaatgg
cacacgggtg
9301 tgtttggcca tgatggggaa aaggggcgct tggttgtgga tggactgagg
gcccgggagg
9361 gaagtttgcc tggaaactcc accatcagca tcagagcgcc agtttacctg
ggatcacctc
9421 catcagggaa accaaagagc ctcccacaaa acagctttgt gggatgcctg
aagaactttc
9481 agctggattc aaaacccttg tataccctt cttcaagctt cggggtgtct
tcctgcttgg
9541 gtggtccttt ggagaaaggc atttatttct ctgaagaagg aggtcatgtc
gtcttggtc
9601 actctgtatt gttggggcca gaatttaagc ttgttttcag catccgcca
agaagtctca
9661 ctgggatcct aatacacatc ggaagtcagc ccgggaagca cttatgtgtt
tacctggagg
9721 caggaaaggc cacggcctct atggacagtg gggcaggtgg gacctcaacg
tcggtcacac

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FIG. 2C-3

FIG. 2C-3
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FIG. 2C-4

~~FIG. 2C~~ (CONT)

9781 caaagcagtc tctgtgtgat ggacagtggc actcgggtggc agtcaccata
aaacaacaca
9841 tcctgcacct ggaactggac acagacagta gctacacagc tggacagatc
cccttcccac
9901 ctgccagcac tcaagagcca ctacaccttg gaggtgctcc agccaatttg
acgacactga
9961 ggatccctgt gtggaaatca ttctttggct gtctgaggaa tattcatgtc
aatcacatcc
10021 ctgtccctgt cactgaagcc ttggaagtc aggggcctgt cagtctgaat
ggttgtcctg
10081 accagtaacc caagcctatt tcacagcaag gaaattcacc ttcaaaagca
ctgattaccc
10141 aatgcacctc cctccccagc tcgagatcat tcttcaactca ggacacaaac
cagacagggt
10201 taatagcgaa tctaattttg aattctgacc atggataccc atcactttgg
cattcagtgc
10261 tacatgtgta ttttatataa aaatcccatt tcttgaagat aaaaaaattg
ttattcaaat
10321 tgttatgcac agaatgtttt tggtaatatt aatttccact aaaaaattaa
atgtctttta
10381 agaaacattc ttttccactt gttaaaaaaa ttaaataat tttaaagcac
tttaagaata
10441 tgaaactttc atatatgtta aaggattata atttatggaa ttaaaaaatg
cagtgtagtc
10501 cttaaaaaaa a

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as

FIG. 2C-4

FIG. 2C-4

~~FIG. 2D~~

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MAAAARPRGRALGPVLPPTPLLLLVLRLVPACGATARDPGAAAG

LSLHPTYFNLAEAAARIWATATCGERGPGEGRPQPELYCKLVGGPTAPGSGHTIQGQFC
DYCNSEDPRKAHPVTNAIDGSRWWQSPPLSSGTQYNRVNLTLDLGQLFHVAYILIKF
ANSRPDLWVLERSVDFGSTYSPWQYFAHSKVDCLKEFGREANMAVTRDDDVLVTEY
SRIVPLENGEVVSLINGRPGAKNFTFSHTLREFTKATNIRLRLRTNTLLGHLISKA
QRDPTVTRRYYYYSIKDISIGGQVCNGHAEVCNINNPEKLFRCECQHHTCGETCDRCC
TGYNQRRWRPAAWEQSHECEACNCHGHASNCYYDPDVERQQASLNTQGIYAGGGVCIN
CQHNTAGVNCEQCAKGYRYPYGVVDAPDGCIPCSCDPEHADGCEQSGRCHCKPNFH

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FIG. 2D-1

FIG. 2D (CONT)

GDNCEKCAIGYYNFPFCLRIPIFPVSTPSSDPVAGDIKGCDNLEGLVLEICDAHGR
CLCRPGVEGPRCDTCRSGFYSPICQACWCSALGSYQMPCSSVTGQCECRPGVTGQRC
DRCLSGAYDFPHCQGSSSACDPAGTINSNLGYCQCKLHVEGPTCSRCKLLYWNLDKEN
PSGCSECKCHKAGTVSGTGECRQGDGDCHCKSHVGGDSCDTCEDGYFALEKSNYFGCQ
GCQCDIGGALSSMCSGPGVCQCREHVVGKVCQRPENNYFPDLHHMKYEIEDGSTPN
GRDLRFGFDPLAFPEFSWRGYAQMTSVQNDVRITLNVGKSSGSLFRVILRYVNPGEA
VSGHITIYPSWGAAQSKEIIFLPSKEPAFVTVPGNGFADPFSITPGIWWACIKAEGVL
LDYLVLLPRDYEASVLQLPVTEPCAYAGPPQENCLLYQHLPVTRFPCTLACEARHFL
LDGEPRPVAVRQPTPAHPVMVDLSGREVELHLRLRIPQVGHYVVVVEYSTAAQLFVV
DVNVKSSGSVLQGVNIYSCNYSVLCRSAVIDHMSRIAMYELLADADIQLKGHMARFL
LHQVCIPIIEEFSAEYVRPQVHCIAASYGRFVNQSATCVSLAHETPPTALILDVLSGRP
FPHLPQQSSPSVDVLPGVTLKAPQNQVTLRGRVPHLGRYVFVIHFYQAAHPTFPAQVS
VDGGWPRAGSFHASFCPHVLGCRDQVIAEGQIEFDISEPEVAATVKVPEGKSLVLVRV
LVVPAENYDYQILHKKSMDSLEFITTNCGKNSFYLDPQTASRFCKNSARSLVAFYHKG
ALPCECHPTGATGPHCSPEGGQCPCQPNVIGRQCTRCATGHYGFPRCKPCSCGRRICE
EMTGQCRCPPTVRPQCEVCETHSFSFHPMAGCEGCNCSRRGTIEAAMPECDRDSGQC
RCKPRITGRQCDRCASGFYRFPECVPCNCNRDGTGPGVCDPGTGACLCKENVEGTECN
VCREGSFHLDPANLKGCTSCFCFGVNNQCHSSHKRRTKFVDMLGWHLETADRVDIPVS
FNPGSNSMVADLQELPATIHSASWVAPTSYLGDKVSSYGGYLTQAKSFGLPGDMVLL
EKKPDVQLTGQHMSIIYEETNTPRPDLHHGRVHVVEGNFRHASSRAPVSREELMTVL
SRLADVRIQGLYFTETQRLTLSEVGLLEEASDTGSGRIALAVEICACPPAYAGDSCQGC
SPGYRDRHKGLYTGRVCPCNCNGHSNQCQDGSIGVNCQHNTAGEHCERCQEGYYGNA

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FIG. 2D-1

~~FIG. 2D (CONT)~~

VHGSCRACPCPHTNSFATGCVVNGGDVRCSCKAGYTGTCERCAPGYFGNPQKFGGSC
QPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDDCDSCVMTLLNDLATMGEQLRL
VKSQLOGLSASAGLLEQMRHMETQAKDLRNQLLNYSASINHGSKIIEGLERELTDLNQ
EFETLQEKAQVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRNVHILLKQISGTDGEG
NNVPSGDFSREWAEAQRMMRELNRNFGKHLREAEADKRESQLLLNRIRTWQKTHQGE
NNGLANSI RDSLNEYEAKLSDLRARLQEAAAQAKQANGLNQENERALGAIQRQVKEIN
SLQSDFTKYLTADSSLLQTNIALQLMEKSQKEYEKLAASLNEARQELSDKVRELSRS
AGKTSLVEEAEKHARSLQELAKQLEEIKRNASGDELVRCAVDAATAYENILNAIKAAE
DAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMTQKKLKQEVSPALNNL
QOTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSMVRKANDITDEVLDGL
NPIQTDVERIKDTYGRTONEDFKKALTDADNSVNKLTKLPDLWRKIESINQQLPLG
NISDNMDRIRELIQQARDAASKVAVPMRFNGKSGVEVRLPNDLEDLKGYTSLSLFLQR
PNSRENGGTENMFVMYLGNKDASRDYIGMAVVDGQLTCVYNLGDREAELOVDQILTKS
ETKEAVMDRVKFQRIYQFARLNYTKGATSSKPEPTGVYDMDGRNSNTLLNLDPENNVF

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FIG. 2D-1

FIG. 2D-1

YVGGYPPDFKLPSRLSFPPYKGCIELDDL^{11/20}NENVLSLYNFKKTFNLNTTEVEPCRRRKE
ESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAENGDRFISLNIEDGKL
MVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINVDVQNTIIDGEVFDGS
TYYLGGIPIAIRERFNISTPAFRGCMKNLKKTSGVVRLNDTVGVTKKCSWDKLVRS
SFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQWTRNLQVTLEDGYIELS
TSDSGSPIFKSPQTYMDGLLHYVSVISDNSGLRLLIDDQLLRNSKRLKHISRRQSLR
LGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKRDSVSLGGCSLNKPPFLMLLKGSTRF
NKTKTFRINQLLQDTPVASPRSVKVVQDACSPPKTQANHGAHQFGDIPTSHLLFKLP

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FIG. 2D-2

~~FIG. 2D~~ (CONT)

QELLKPRSQFAVDMQTTSSRGLVFHTGTKNSFMALYLSKGRLVFALGTDGKKLRISK
EKCNDGKWHTVVFGHDGEKGRLVVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKS
LPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYFSEEGGHVVLHSHVLL
GPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASMDSGAGGTSTSVTPKQ
SLCDGQWHSVAVTIKQHILHLELDTSSYTAGQIPFPASTQEPLHLGGAPANLTLR
IPVWKSFFGCLRNIHVNIHVPVTEALEVQGPVSLNGCPDQ"

FIG. 2D-2

~~FIG. 2E~~

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FIG. 2D-2

1 gggatgcctc cagcagtgag gcggtcagcc tgcagcatgg gatggctgtg
gatctttggg
61 gcagccctgg ggcagtgtct gggctacagt tcacagcagc aaagggtgcc
atttcttcag
121 cctcccggtc aaagtcaact gcaagcgagt tatgtggagt ttagaccag
ccagggttgt
181 agccctggat actatcgga tcataaaggc ttgtataccg gacgggtgtg
tcctgcaat
241 tgcaacggac attcaaatca atgccaggat ggctcaggca tatgtgttaa
ctgtcagcac
301 aacaccgcgg gagagcactg tgaacgctgc caggagggct actatggcaa
cgccgtccac
361 ggatcctgca gggcctgccc atgtcctcac actaacagct ttgccactgg
ctgtgtgggtg
421 aatgggggag acgtgcggtg ctctgcaaa gctgggtaca caggaacaca
gtgtgaaagg
481 tgtgcaccgg gatatttcgg gaatccccag aaattcggag gtagctgcca
accatgcagt
541 tgtaacagca atggccagct gggcagctgt catccctga ctggagactg
cataaaccaa
601 gaacccaaag atagcagccc tgcagaagaa tgtgatgatt gcgacagctg
tgtgatgacc
661 ctctgaacg acctggccac catgggcgag cagctccgcc tggtaagtc
tcagctgcag
721 ggctgagtg ccagcgcagg gcttctggag cagatgaggc acatggagac
ccaggccaag
781 gacctgagga atcagttgct caactaccgt tctgccattt caaatcatgg
atcaaaaata

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FIG. 2E-1

~~FIG. 2E (CONT)~~

841 gaaggcctgg aaagagaact gactgatttg aatcaagaat ttgagacttt
gcaagaaaag
901 gctcaagtaa attccagaaa agcacaaaca ttaaacaaca atgttaatcg
ggcaacacaa
961 agcgcaaaag aactggatgt gaagattaaa aatgtcatcc ggaatgtgca
cattctttta
1021 aagcagatct ctgggacaga tggagaggga aacaacgtgc cttcaggtga
cttttccaga
1081 gagtgggctg aagccdagcg catgatgagg gaactgcgga acaggaactt
tggaagcac
1141 ctgagagaag cagaagctga taaaaggag tgcagctct tgctgaaccg
gataaggacc
1201 tggcagaaaa cccaccaggg ggagaacaat gggcttgcta acagtatccg
ggattcttta
1261 aatgaatagc aagccaaact cagtgcctt cgtgctcggc tgcaggaggc
agctgcccaa
1321 gccaaagcagg caaatggctt gaaccaagaa aacgagagag ctttgggagc
cattcagaga
1381 caagtgaaag aaataaattc cctgcagagt gatttcacca agtatctaac
cactgcagac
1441 tcatctttgt tgcaaaccaa cattgcgctg cagctgatgg agaaaagcca
gaaggaatat
1501 gaaaaattag ctgccagttt aatgaagca agacaagaac taagtgacaa
agtaagagaa
1561 ctttccagat ctgctggcaa aacatccctt gtggaggagg cagaaaagca
cgcgcggtcc
1621 ttacaagagc tggcaaagca gctggaagag atcaagagaa acgccagcgg
ggatgagctg
1681 gtgcgctgtg ctgtggatgc cgccaccgcc tacgagaaca tcctcaatgc
catcaaagcg
1741 gccgaggacg cagccaacag ggctgccagt gcatctgaat ctgccctcca
gacagtgata
1801 aaggaagatc tgccaagaaa agctaaaacc ctgagttcca acagtgataa
actgttaa
1861 gaagccaaga tgacacaaaa gaagctaaag caagaagtca gtccagctct
caacaaccta
1921 cagcaaacc cagaatattgt gacagttcag aaagaagtga tagacaccaa
tctcacaact
1981 ctccgagatg gtcttcatgg gatacagaga ggtgatattg atgctatgat
cagtagtgca
2041 aagagcatgg tcagaaaggc caacgacatc acagatgagg ttctggatgg
gctcaacccc
2101 atccagacag atgtggaaag aattaaggac acctatggga ggacacagaa
cgaagacttc

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to
FIG. 2E-1

~~FIG. 2E (CONT)~~

2161 aaaaaggctc tgactgatgc agataactcg gtgaataagt taaccaacaa
actacctgat
2221 ctttggcgca agattgaaag tatcaaccaa cagctgttgc ccttgggaaa
catctctgac
2281 aacatggaca gaatacgaga actaattcag caggccagag atgctgccag
taaggttgct
2341 gtcccatga gggtcaatgg taaatctgga gtcgaagtcc gactgccaaa
tgacctggaa
2401 gatttgaaag gatatacatc tctgtccttg tttctccaaa ggcccaactc
aagagaaaat
2461 gggggactg agaatatggt tgtgatgtac cttggaaata aagatgcctc
ccgggactac
2521 atcggcatgg cagttgtgga tggccagctc acctgtgtct acaacctggg
ggacctgag
2581 gctgaactcc aagtggacca gatcttgacc aagagtgaga ctaaggaggc
agttatggat
2641 cgggtgaaat ttcagagaat ttatcagttt gcaaggctta attacaccaa
aggagccaca
2701 tccagtaaac cagaaacacc cggagtctat gacatggatg gtagaaatag
caatacactc
2761 cttaatttgg atcctgaaaa tgttgtatth tatgttggag gttaccacc
tgattttaaa
2821 cttcccagtc gactaagttt cctccatac aaaggttgta ttgaattaga
tgacctcaat
2881 gaaaatgttc tgagcttgta caacttcaaa aaaacattca atctcaacac
aactgaagtg
2941 gagccttgta gaaggaggaa ggaagagtca gacaaaaatt attttgaagg
tacgggctat
3001 gctcgagttc caactcaacc acatgctccc atcccaacct ttggacagac
aattcagacc
3061 accgtggata gaggcttgct gttctttgca gaaaacgggg atcgcttcat
atctctaaat
3121 atagaagatg gcaagctcat ggtgagatac aaactgaatt cagagctacc
aaaagagaga
3181 ggagttggag acgccataaa caacggcaga gaccattcga ttcagatcaa
aattggaaaa
3241 ctccaaaagc gtatgtggat aaatgtggac gttcaaaaca ctataattga
tggtgaagta
3301 tttgatttca gcacatatta tctgggagga attccaattg caatcagga
aagatttaac
3361 atttctacgc ctgctttccg aggtgcatg aaaaatttga agaaaaccag
tggtgtcggt
3421 agattgaatg atactgtggg agtaaccaa aagtgtcgg aagactggaa
gcttgtgcga

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FIG. 2E-1

FIG. 2E-1
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FIG. 2E-2

FIG. 2E (CONT)

3481 tctgcctcat tctccagagg aggacaattg agtttctactg atttgggctt
accacctact
3541 gaccacctcc aggcctcatt tggatttcag acctttcaac ccagtggcat
attattagat
3601 catcagacat ggacaaggaa cctgcaggtc actctggaag atggttacat
tgaattgagc
3661 accagcgata gcggcagccc aatttttaaa tctccacaga cgtatatgga
tggtttactg
3721 cattatgtat ctgtaataag cgacaactct ggactacggc ttctcatcga
tgaccagctt
3781 ctgagaaata gcaaaaggct aaaacacatt tcaagttccc ggcagtctct
gcgtctgggc
3841 gggagcaatt ttgagggttg tattagcaat gtttttgtcc agaggttatc
actgagtctt
3901 gaagtcctag atttgaccag taactctctc aagagagatg tgtccctggg
aggctgcagt
3961 ttaaacaaac caccttttct aatgttgctt aaaggttcta ccaggtttaa
caagaccaag
4021 acttttcgta tcaaccagct gttgcaggac acaccagtgg cctccccaag
gagcgtgaag
4081 gtgtggcaag atgcttgctc accacttccc aagaccagg ccaatcatgg
agccctccag
4141 tttggggaca ttcccaccag ccacttgcta ttcaagcttc ctcaggagct
gctgaaaccc
4201 aggtcacagt ttgctgtgga catgcagaca acatcctcca gaggactggt
gtttcacacg
4261 ggcactaaga actcctttat ggctctttat ctttcaaaag gacgtctggt
ctttgcactg
4321 gggacagatg ggaaaaaatt gaggatcaaa agcaaggaga aatgcaatga
tgggaaatgg
4381 cacacggtgg tgtttgcca tgatggggaa aaggggagct tggttgtgga
tggaactgagg
4441 gcccgaggagg gaagtttgcc tggaaactcc accatcagca tcagagcgcc
agtttacctg
4501 ggatcacctc catcaggga accaaagagc ctccccacaa acagctttgt
gggatgcctg
4561 aagaactttc agctggattc aaaacccttg tataccctt cttcaagctt
cggggtgtct
4621 tcctgcttgg gtggctcttt ggagaaaggc atttatttct ctgaagaagg
aggtcatgtc
4681 gtcttggtc actctgtatt gttggggcca gaatttaagc ttgttttcag
catccgcca
4741 agaagtctca ctgggatcct aatacacatc ggaagtcagc ccgggaagca
cttatgtgtt

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FIG. 2E-2

~~FIG. 2E (CONT)~~

4801 tacctggagg caggaaaggt cacggcctct atggacagtg gggcaggtgg
gacctcaacg
4861 tcggtcacac caaagcagtc tctgtgtgat ggacagtggc actcgggtggc
agtcaccata
4921 aaacaacaca tcttgcacct ggaactggac acagacagta gctacacagc
tggacagatc
4981 cccttcccac ctgccagcac tcaagagcca ctacaccttg gaggtgctcc
agccaatttg
5041 acgacactga ggatccctgt gtggaaatca ttctttgggt gtctgaggaa
tattcatgtc
5101 aatcacatcc ctgtccctgt cactgaagcc ttggaagtcc aggggcctgt
cagtctgaat
5161 ggttgtcctg accagtaacc caagcctatt tcacagcaag gaaattcacc
ttcaaaagca
5221 ctgattaccc aatgcacctc cctccccagc tcgagatcat tcttcactca
ggacacaaac
5281 cagacagggt taatagcgaa tctaattttg aattctgacc atggatcccc
atcacttttg
5341 cattcagtgc tacatgtgta ttttatataa aaatcccatt tcttgaagat
aaaaaaattg
5401 ttattcaa at tgttatgcac agaatgtttt tggtaatatt aatttccact
aaaaaattaa
5461 atgtctttta agaaacattc ttttccactt gttaaaaaaa ttaaatatat
tttaaagcac
5521 tttaagaata tgaaactttc atatatgtta aaggattata atttatggaa
ttaaaaaatg
5581 cagtgtagtc cttaaaaaaa a

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FIG. 2E-2

FIG. 2E-2

~~FIG. 2F~~

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MPPAVRRSACSMGWLWIFGAALGQCLGYSSQQQRPFLQPPGQS
QLQASYVEFRPSQGCSPGYRDKGLYTGRVCPCNCNGHSNQCQDGSIGVCNCQHNTA
GEHCERCQEGYYGNAVHGSCRACPCPHTNSFATGCVVNGGDVRCCKAGYTGTQCERC
APGYFGNPQKFGGSCQPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDSCDSCVM
TLLNDLATMGEQLRLVKSQLOGLSASAGLLEQMRHMETQAKDLRNQLLNYRSAISNHG
SKIEGLERELTDLNQEFETLQEKAVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRN
VHILLKQISGTDGEGNNVPSGDFSREWAEAQMMRELNRNFGKHLREAEADKRESQL

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FIG. 2F

~~FIG. 2F~~ (CONT)

LLNRIRTWQKTHQGENNGLANSIRDSLNEYEAKLSDLRARLQEAAAQAKQANGLNQEN
ERALGAIQRQVKEINSLQSDFTKYLTADSSLLQTNIALQLMEKSQKEYEKLAAASLNE
ARQELSDKVRELSRSAGKTSLVEEAEKHARSLQELAKQLEEIKRNASGDELVRCAVDA
ATAYENILNAIKAAEDAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMT
QKKLKQEVSPALNNLQQTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSM
VRKANDITDEVLDGLNPIQTDVERIKDTYGRQTQNEDEFKALTDADNSVNKLTKNLPDL
WRKIESINQQLPLGNI SDNMDRI RELIQQARDAASKVAVPMRFNGKSGVEVRLPNDL
EDLKGYTSLSLFLQRPNSRENGGTENMFVMYLGKNDASRDYIGMAVVDGQLTCVYNLG
DREAELQVDQILTKSETKEAVMDRVKFQRIYQFARLNYTKGATSSKPETPGVYDMDGR
NSNTLLNLDPENNVFVYGGYPDFKLPSRLSFPPYKGCIELDDL NENVLSLYNFKKTF
NLNTTEVEPCRRRKEESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAE
NGDRFISLNIEDGKLMVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINV
DVQNTIIDGEVDFDFSTYYLGGIPIAIRERFNI STPAFRGCMKNLKKTSGVVRLNDTVG
VTKKCEDWKLVRSA SF SRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQTWT
RNLQVTLEDGYIELSTSDSGSPIFKSPQTYMDGLLHYVSVISDN SGLRLLIDDQLLRN
SKRLKHISRRQSLRLGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKR DVS LGGCSL
NKPPFLMLLLKGSTRFNKTKTFRINQLLQDTPVASPRSVK VQDAC SPLPKTQANH GAL
QFGDIPTSHLLFKLPQELLKPRSQFAVDMQTTSSRGLVFHTG TKNSFMALYLSKGRLV
FALGTDGKKLRIKSKEKCNDGKWHTVVF GHDGEKGRLVVDGLRAREGSLPGNSTISIR
APVYLGSPPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYF
SEEGGHVVL AHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASM
DSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFP PASTQE

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FIG. 2F

~~FIG. 2F (CONT)~~

PLHLGGAPANLTTLRIPVWKSFFGCLRNIHVNHIPVPVTEALEVQGPVSLNGCPDQ

FIG.-2F

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FIG.-2F

~~FIG. 2G~~

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1 gtataagagg aagaacacaa aggtttgcag cagccaggca gaacaccaag
ggatcaagat
61 gccgcctaca gtgaggtggt cagcctggtg cacaggatgg ctgtggatct
ttggggcagc
121 tctggggccag tgcctgggggt atggctcaga gcagcaaagg gtagcatttc
ttcagcatcc
181 agggcaaaac catctgcaag caagttatat ggagcttaga cccagccagg
gctgtcgccc
241 aggatactat cgagacatca aaagcttccc tgcgggaagg tctgttcct
gcaattgcaa
301 cggacattca aatagatgcc aagacggctc gggagtgtgc attaactgtc
agcacaacac
361 agctggggag cactgtgagc gttgcaagag gggttactat ggaagcgcca
tccatggatc
421 ctgcagggtt tgcccctgtc ctcacaccaa cagctttgcc actggctgtg
ctgtggatgg
481 aggagctgtg aggtgtgcct gcaaaccg atacacagga gcacagtgtg
agaggtgtgc
541 accaggatat tttgggaacc cccagaaatt tggaggtagc tgccaaccat
gcaattgcaa
601 cagtaatggc cagtttgga cttgtgatcc cctaactgga gactgtgtaa
gccaagaacc
661 caaagatggc agccctgcag aagaatgtga tgactgtgac agctgtgtga
tgactctcct
721 aaatgacttg gtcccatgg gtgaggaact cgccctggtg aaatcaaaac
ttcaggggt
781 gactgtgaac actggttctc tggaacagat ccggcatgtg gagatgcagg
ccaaggacct
841 gaggaaccag ctgcttggt tccgttcgc catctccagt cacgggtccc
aaatggacgg
901 cctggaaaaa gaactcagtc atttgtacca ggaattcgaa actttgcaag
aaaaggcgca
961 ggtcaattcc agaaaagcac aaacattata taacaacatc gatacgacaa
tccaaaacgc
1021 caaagagttg gacatgaaga ttaaaaacat acttacgaat gtgcacattc
tctgaagca
1081 gatcgctcgg ccaggtggag aaggaatgga cttgccggtg ggcgactggt
ccagggagtc

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as
FIG.-2G-1

~~FIG. 26 (CONT)~~

1141 ggcggaagct cagcgcacgt tgcgggagct gcgaggccga gactttaaaa
agcacctcca
1201 agaagcagag gccagaaaa tggaagccca gctcttactg aaccgaatca
ggacctggct
1261 ggaatcccac caggtggaga acaatggact gctaaagaat attcgggatt
cattaaatga
1321 ttatgaagcc aaacttcagg acctgcgttc cgtgcttcag gaggcggcag
cccagggaaa
1381 gcaggctaca ggcctcaacc acgaaaatga gggggtccta ggagccatcc
agagacaaat
1441 gaaggaaatg gattccctga agaagtacct caccgagcac ctggccacag
cagacgcttc
1501 cctgctgcaa accaacagtc tactgcagcg gatggacacg agccagaagg
agtatgaaag
1561 cttagctgct gctttaaacg gagcaagaca ggaactgaat gaccaagtgc
gggaactctc
1621 cagatccgga ggcaaagcac ccctgggtggc tgaggccgag aagcacgctc
agtctttaca
1681 ggagctggca aagcagctgg aagagataaa gagaaacacc agtggggatg
agtcggtgcg
1741 ctgtgtcgtg gacgctgcca ctgcctatga gagcatcctc aacgccatcc
gagcagcaga
1801 ggatgcagcc ggcaaggccg acagtgcctc agagtccgcc ttccagacag
tgataaagga
1861 agatcttccg agaagagcca aaaccctgag ttctgacagc gaggaactgt
taaacgaggc
1921 caagatgaca cggaaaaggc tacagcaaga aatcaatcca gctctcaaca
gcctacagca
1981 aaccctgaag actgtatcag ttcagaagga cctgctagat gccaatgtca
ctgctgtccg
2041 taatgacctt cgtgggatcc agagaggtga tattgacagt gtggtgagtg
gagcgaagag
2101 catggtcagg aaagccaatg ggataacgag cgaggctctg gacgggctca
gccccatcca
2161 gacggatttg ggaaggatta aggacagcta cgggagcaca cggcatgagg
acttcaacaa
2221 agctctgatt gacgccaata actcagtaaa gaaattaacc aagaagttgc
ctgatctttt
2281 tgtcaagatt gaaagcatca atcaacagtt gctgcccctg ggaaacatct
ctgacaatgt
2341 agaccgaatc cgagagctca ttacgcaggc cagagatgct gcgaacaagg
ttgcaattcc
2401 catgagggtc aatggtaaata ctggtgttga agtccgtctg ccaaatagacc
tagaagactt

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as

Fig. 26-1

FIG. 2G (CONT)

2461 gaagggatac acgtctctgt ctttgttcct ccaaagacca gacttaagag
agaatggagg
2521 cactgaggac atgtttgtaa tgtaccttgg aaacaaggat gcctccaagg
actacatcgg
2581 catggcgggt gtagatggcc agctgacgtg tgtctacaac ctggggggacc
gagaagctga
2641 agttcagatc gatcagggtc tgacggagag tgagtctcag gaggcagtta
tggaccgggt
2701 gaagttccag agaatatatc aatttgccaa gcttaattac accaaagaag
ccacgtccaa
2761 taaacccaaa gctcccgcgg tctacgacct ggagggtggc agtagcaaca
cgctccttaa
2821 tttggatccc gaggacgctg tgttttatgt cggagggttac ccaccggatt
ttgaacttcc
2881 tagcagactg cggttccctc catacaaagg ctgtatcgaa ctagatgacc
tcaatgaaaa
2941 cgttctaagc ttgtacaatt tcaagacaac tttcaatctc aacaccacgg
aggtggagcc
3001 ttgtaggagg agaaaggaag agtcagacaa aaattacttt gaaggtacag
gctatgctcg
3061 catccctact caaccaaagc ctcccttccc aaacttcata cagaccatcc
agactactgt
3121 ggacagaggt ttactgttct tcgcagaaaa ccaggataac ttcatatctc
tgaacataga
3181 agatggcaat ctcatggtga gatacaaact aaattcagag ccacccaaag
agaaggggaat
3241 tcgagacacc atcaacgatg ggaaagatca ttcgatctta atcacaattg
gaaaactaca
3301 aaaacgcatg tggataaatg tgaacgaacg cagtgtacga atcgaagggg
aatattttga
3361 tttcagcaca tattatttgg gcggaattcc aattgcaatc agagaaaggt
ttaacatctc
3421 aacgcctgct ttccaaggct gcatgaagaa tctgaagaaa accagtgggg
ttgtcaggtt
3481 gaatgatact gtgggtgtaa ccaagaagtg ctcagaagac tggaagcttg
tgcaaacgc
3541 ctcgttctcc agaggagggc agatgagctt tacaaacttg gacgtgccct
cgactgaccg
3601 cttccagctc tcctttgggt ttcagacctt tcaaccagc ggcacactgc
tcaatcatca
3661 gacgcggaca agcagcctgc tggtcaccct ggaagatggg cacattgagt
tgagcactag
3721 ggacagcaac atcccaattt tcaagtctcc agggacctac atggacgggt
tactgcatca

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FIG. 2G-1

FIG. 2G-1
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FIG. 2G-2

~~FIG. 2G~~ (CONT)

3781 tgtatctgta ataagtgaca cctcaggtct cgccttctc atcgatgacc
aggctcctgag
3841 aaggaaccag aggcttecta gcttctctaa cgcccagcag tcgctccgcc
ttggaggagg
3901 tcatttcgag ggttgtatca gcaatgtttt agtccaaagg ttttcacaga
gtccagaagt
3961 cctggatctg gccagtaa ataccaagaa ggatgcatcc ctaggaggct
gcagtttaaa
4021 caagccacct tttcttatgt tgtttaaaag tcccaagaga tttacaagg
gccggatttt
4081 caatgttaat cagctgatgc aagatgcacc tcaggccaca aggagcacag
aggcttgga
4141 agatgggagg tctgcctac cacctctgaa caccaaggcc tctcacagag
ccctgcagtt
4201 tggagacagc cccaccagcc acttgctact caagcttccc caggaactgc
tgaaacctag
4261 gtcacagttt tctttagaca tacagacaac tcccccaaa ggactggtgt
tttaacgagg
4321 caccaaggac tccttcttgg ctctttatgt cgcagatggc cgtgttgtct
ttgctttggg
4381 ggcaggaggg aagaaactga gactcaggag caaggagaga taccatgacg
ggaagtggca
4441 cacggtggtg ttcggactaa atggaggaaa ggcacgcctg gttgtggatg
ggctaagggc
4501 ccaggaaggc agtttgctg gaaattctac catcagcccc agagaacagg
tttacctagg
4561 gttgccgcta tcaagaaagc caaagagcct accccagcac agttttgtgg
ggtgcctgag
4621 agatttccag ttgaactcga aaccctgga ttctccttct gcgagggttg
gggtatctcc
4681 ctgcttggtt ggctctttag agaaaggcat ttatttctcc caaggaggag
gccatgtgat
4741 cctagccaat tctgtgtcct tggggccaga gcttaagctc actttcagca
ttcgcccacg
4801 gagtctcact ggggtcttaa tacacgtcgg aagtcaatct ggacagcgct
taagtgtgta
4861 catggaggca ggaaaggcca caacctctgt gagcagtgat gcaggaggaa
gtgtgacatc
4921 aattacaccg aagcagtctc tgtgtgatgg acagtggcac tcggtggcag
tctccattaa
4981 acagcgcac ctagcatctag aactggatac agacagtagc tacacagtcg
caccactttc
5041 cttctcacca aacagcacc gagggctcact gcacgtcggg ggtgtcccag
acaaattgaa

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FIG. 2G2

FIG. 2G (CONT)

5101 aatgcttaca ctccctgtgt ggaactcatt ttttggtgt ctgaagaata
ttcaagtcaa
5161 ccatgtccct gtcccatca cagaagccac agaagtccaa ggttctgtca
gcctgaatgg
5221 ctgccctgac cactaaccct acacagcaag attcaccttt ggag

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FIG. 2G-2

FIG. 2G-2

FIG. 2H

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MPPTVRWSAWCTGWLWIFGAALGQCLGYGSEQQRVAFLOHPGQN

HLQASYMELRPSQGCRPGYYRDIKSFPAGRSVPCNCNGHSNRCQDGSVCINCQHNTA
GEHCERCKRGYYGSAIHGSCRVCPCPHTNSFATGCAVDGGAVRCACKPGYTGAQCERC
APGYFGNPQKFGGSCQPCNCNSNGQFGTCDPLTGDCVSQEPKDGSPAEECDDCDSCVM
TLLNDLVPMBEELALVKSLLQGLSVNTGSLEQIRHVEMQAKDLRNQLLGFRSAISSHG
SQMDGLEKELSHLYQEFETLQEKAQVNSRKAQTLNNIDTTIQNAKELDMKIKNILT
NHILLKQIARPGGEGMDLPVGDWSRESAEARMLRELGRDFKKHLQEAEAKMEAO
LLNRIRTWLESHQVENNGLLNIRDSLNDYEAKLQDLRSVLQEAAAQKGATGLNHEN
EGVLGAIQRQMKEMDSLKKYLTEHLATADASLLQTNSSLQRMDSQKEYESLAAALNG
ARQELNDQVRELSRSGGKAPLVAEAEKHAQSLQELAKQLEEIKRNTSGDESVRCVDA
ATAYESIILNAIRAAEDAAGKADSASESAFQTVIKEDLPRRAKTLSSDSEELLNEAKMT
RKRLQQEINPALNSLQQLKTVSVQKDLLDANVTAVRNDLRGIQRGDIDSVVSGAKSM
VRKANGITSEVLDGLSPIQTDLGRIKDSYGSTRHEDFNKALIDANNSVKKLTCKLPDL
FVKIESINQQLPLGNI SDNVDRIRELITQARDAANKVAIPMRFNKGSGVEVRLPNDL
EDLKGYSLSLFLQRPDLRENGGTEDMFVYMLGNKDASKDYIGMAVVDGQLTCVYNLG
DREAEVQIDQVLTESESQEAVM DRVKFQRIYQFAKLNYTKEATSNKPKAPAVYDLEGG
SSNTLLNLDPEDAVFYVGGYPPDFELPSRLRFPYKGCIELDDLNNVLSLYNFKTTF
NLNTTEVEPCRRRKEESDKNYFEGTGYARIPTQPNAPFPNFIQTIQTTVDRGLLFFAE

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FIG. 2H

~~FIG. 2H~~ (CONT)

NQDNFISLNIEDGNLMVRYKLNSEPPKEKGIRDTINDGKDHSILITIGKLQKRMWINV
NERSVRIEGEIFDFSTYYLGGIPIAIRERFNI STPAFQGCMKNLKKTSVVRLNDTVG
VTKKCEDWKLVRTASFRRGQMSFTNLDVPSTDRFQLSFGFQTFQPSGTLLNHQTRT
SSLLVTLEDGHIELSTRDSNIPIFKSPGTMDGLLHHVSVISDTSGLRLLIDDQVLRR
NQRLPSFSNAQQSLRLGGGHFEGCISNVLVQRFSSQPEVLDLASKSTKKDASLGGCSL
NKPPFLMLFKSPKRFNKGRI FNVNQLMQDAPQATRSTEAWQDGRSCLPPLNTKASHRA
LQFGDSPTSHLLLKLPQELLKPRSQFSLDIQTTSPKGLVIFYAGTKDSFLALYVADGRV
VFALGAGGKKLRLRSKERYHDGKWHTVVFGLNNGGKARLVVDGLRAQEGSLPGNSTISP
REQVYLGLPLSRKPKSLPQHSFVGCLRDFQLNSKPLDSPSARFGVSPCLGGSLEKGIY
FSQGGGHVILANSVSLGPELKLTF SIRPRSLTGVLHVGSQSGQRLSVYMEAGKVTTTS
VSSDAGGSVTSITPKQSLCDGQWHSVAVSIKQRILHLELDTDSSYTVAPLSFSPNSTR
GSLHVGVPDKLKMLTLPVWNSFFGCLKNIQVNHVPVPITEATEVQGSVSLNGCPDH

FIG. 2H

~~FIG. 2I~~

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FIG. 2H

1 atgtcagagg gcatttgctg ccgagctggc gcactgtgca agagtggaca
gcaagtttcc
61 actgtggtgg tggtagatcc accaaaccat gccagtggaa tgagaactga
atgcagccca
121 ccagagcacg tgcacacgtg cattaaggaa cctcagaatc agctcttcca
tgtggcttat
181 atcttaatca aatttgcaaa ctctccccgc cctgatcttt ggatcctgga
aagatctgta
241 gacttttgaa gcacctactc accatggcag tatttttgctc attctagaag
agattgtgta
301 gaacagtttg ggcaagaagc aaacatggca attacccagg acgaccagat
gctctgtgta
361 acggagtatt cccgtatcgt gcctctggaa aatggcgaga ttgttgatc
cttgataaat
421 ggtcgtccag gtgcaaaaaa gtttgctttc tctgacactc tgagggagtt
tactaaggca

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as

FIG. 2I-1

~~FIG. 2I (CONT)~~

481 acaaacatcc gcttgcggtt tctgcgaacc aacaccctcc tcgggcatct
tatttccaag
541 gcagagcgag accccactgt cacgcgccgg tattattgca tggaagctga
tgatgctctg
601 ttctctgtcc tgcagtatta ttacagcata aaggatatca gtgttggtgg
gcggtgtggt
661 tgcaacggcc atgcggaggc gtgcagtgtc gacaaccctg aaaagcagtt
ccgatgcgaa
721 tgccagcacc atacctgtgg agacacgtgt aaccgctgct gtgcaggtta
caatcagagg
781 cgctggcagc ctgctgggtca ggagcagcac aatgagtgtg aagcctgcaa
ctgccatggg
841 catgctgtgg actgctacta tgaccagac gtggagcacc agcaggcgag
cttgaacagc
901 aaaggcgtct acgcagggtg aggggtctgc atcaactgtc agcacaacac
tgcaggcgtg
961 aactgtgaaa agtgtgcgaa gggttacttc cggccccatg gagttccggt
ggatgcactg
1021 catggatgca tcccttgcag ctgtgacca gaacgcgcag atgactgtga
ccagggtc
1081 ggccactgcc attgtaagcc aaatttctcc ggagactact gtgagacgtg
tgcagatggg
1141 tactataatt ttccattttg cttgagaatt ccagtctttc ccaactacac
tccaagtcca
1201 gaagatccag tggctggcaa tataaaaggc aaggatccag ggactctaga
cccaccagt
1261 atagcaaatg gggcatatct tggagcttca agactagagc aaggagccac
aggccagggc
1321 agccctgctg agagggtcac ccacaccaac tcatggctga gttcctcaat
gcctatgctc
1381 caggttaggg ctgccatcca tgaggctaag tggtactctc tgtgtttctg
tatgtatgtt
1441 gagcacagtg ggactgtacc acctgctctg gggtcagggt atacagggga
ctctgagcct
1501 aaaacaggaa cccaggcaaa aaggggggtg gactgtaact tggaagggtg
tctcccagag
1561 atatgtgacg atcgtggcag gtgcctgtgc cgcctgggg ttgagggtcc
ccagtgtgac
1621 tcttgccgct cgggtccta ttcatttccc atatgccaag cttgccagt
ttcgacgatt
1681 ggatcctatc cagtgcctg tgaccgggg aatggccagt gtgactgcct
gcctggaatt
1741 accgggaggc agtgtgacag gtgtctctcg ggagcctatg actttccata
ctgccaaggt

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as
FIG. 2I-1

~~FIG. 2I (CONT)~~

1801 aaggaagccg gcagcatggt ggaggctcgg tctcatctg agtgggtgca
gctgacctct
1861 tggagaagcc tgggttattg tcagtgaag cagcatgttg caagtcctac
atgtagtgtc
1921 tgcaaaccat tatattggaa tctggccaaa gaaaaccccc gtggatgtc
agagtgccag
1981 tgccatgaag cagggacatt gagtgaatt ggagagtgtg ggcaggagga
cggtgactgt
2041 agctgcaaag cccatgtaac tggatgagcc tgcgacacct gtgaagatgg
gtttttctct
2101 ttggagaaga gcaattactt tggctgtcaa ggggtgtcagt gtgacattgg
tggagcactc
2161 accaccatgt gtagtgggccc ctcgggagta tgccagtga gagagcacgt
ggaggggaaa
2221 cagtgccaga ggcctgaaaa taactactac ttcccggatt tgcaccacat
gaagtatgag
2281 gtcgaagatg gcaactggacc taatggaaga aacctgcggt ttggatttga
tcccctggta
2341 ttccctgagt ttagctggag aggatatgct ccaatgacct cagtccaggt
atatatgagt
2401 gagtgtgtgt gtcctctaca ctgcatgtta ttttggggta cttttcagaa
tgaagtaagg
2461 gtgagattgt ctgtgaggca gtccagcctc tcttggttcc gcacgttct
gagatacatc
2521 agtcctggaa cggaagccat atccggccga atcactcttt actcatcgca
gggagattcg
2581 gatgctttgc aaagcagaaa aatcaccttt cccccgagta aagagccagc
ctttgtcaca
2641 gtccctggga atggctttgc aggccattc tccatcacac ctgggacgtg
gattgcttgc
2701 atccaggtgg aaggagtcc tctggactac ctggtgctgc ttcccaggga
ctactatgaa
2761 gcattcacc c tgcaagtgcc agtcacagag ccatgtgccc acacaggatc
tcccaggac
2821 aactgtttgc tttaccagca tttaccactg actgcattct cctgtaccct
ggcttgtgag
2881 gccagacact tctgctgga tggagagctg agacccttgg caatgaggca
gccacacccc
2941 acacacccag ccatggtgga cctcagcggg agagaggtag aactgcagct
tcgtctgcgg
3001 gtcccacagg ttggccacta cgtggtcctg ctggagtatg ccacggaggt
ggagcagctt
3061 tttgtggtgg acgtgaatct gaagagctca gggctcgcct tggcaggcca
ggtgaacata

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FIG.-2I-1

FIG. 2I-1
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FIG.-2I-2

~~FIG. 2I~~ (CONT)

3121 tacagctgca agtacagcat cccgtgcagg agtgtggtga ttgacagcct
gagtgcacg
3181 gctgtacatg agctgttggc agatgcagac attcagctca aggcgcacat
ggcccatttc
3241 cttttgtatc acatttgtat tataccagct gaagaattct caactgaata
tttgagacct
3301 caagtccact gcattgccag ctacaggcag catgctaate caagtgttc
ctgtgtctcc
3361 ctggcccatg aaactcctcc aacagcctca attttggatg ctacaagtag
gggccttttc
3421 tctgccttac ctcatgagcc ttctctctct gcagatggag ttactctgaa
ggcaccacag
3481 agtcaagtga ccctgaaagg actcatacca cacctgggccc gacacgtctt
tgtcatccat
3541 ttttatcaag cagagcacc agggtttccc actgaggtga ttgtgaatgg
aggaagacag
3601 tggtcagggt ccttccttgc ctctctctgt cccacttac ttggctgccg
ggaccagggtg
3661 atctctgatg gccaaagtga gtttgacatc tctgaagcag aggtagctgt
gacagtgaag
3721 attccagatg gaaagtcctt aacattgggtc cgggttctag tggtagctgc
agagaattac
3781 gactacaaa ttcttcacaa aacaacagtg gacaagtcct ccgagttcat
cagcagttgt
3841 ggaggagaca gcttttatat tgatccccag gcagcctctg gattctgtaa
gaattctgca
3901 aggtccctgg tagcctttta ccataacggt gccataccct gtgagtgcca
ccctgctggg
3961 actgccggcc accactgtag tcctgagggt gggcagtgcc cttgccggcc
caatgtcatc
4021 gggaggcagt gcagccgctg tgcgacaggc tactatggat tcccatactg
caagccttgt
4081 aattgtggca gacgcctttg tgaagaggtg acagggaagt gtctctgccc
acccacaca
4141 gtcaggcctc agtgtgaggt ctgtgagatg aattccttca actttcaccc
tgtggctggc
4201 tgtgacgtct gcaactgctc caggaagggc accattgagg cggccgtctc
tgagtgtgac
4261 agggacagcg ggcagtgca gtgcaagcct agagtcacag ggcagcagt
tgacaagtgt
4321 gctcctggct tctaccagtt ccctgagtg gtccctgca gctgtaacag
agatgggact
4381 gagcccagcg tatgtgaccc agagactggg gcttgcatgt gcaaggaaaa
tgtagagggc

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as

FIG. 2I-2

~~FIG. 2I (CONT)~~

4441 ccccaatgtc aactgtgtcg agaaggatca ttctacctgg acccaacaaa
cccaaagggg
4501 tgtaccaagt gcttctgttt tggagtgaat actgactgtc agagttcgca
taagcaacga
4561 gctaagtttg tagacatgat gggctggcgt ctggagacag cagatggagt
tgatgtccct
4621 gtgtccttca accctggcag caacagcatg gtggcagatc tgcaggagct
gccaccctca
4681 gttcacagtg catcctgggt ggcacctcca tcctacctag gtgataaggt
atcatcgtac
4741 ggcggctacc tcacctacca cgccaagtcc tttggcttac ctggagatat
ggttcttctg
4801 ggaaagcagc cagatgtgca gctcactggg caacacatgt ccctcatcca
taaggaaccc
4861 agcgaccac gccagacag gctgcatcac ggaagagtgc aagtgattga
gggaaacttc
4921 agacacgaag gcagcagtgc cccagtgtcc cgggaggagc tgatgactgt
gctgtccaga
4981 ctggaaagac tccacatccg gggcctccat ttcaccgaga cacagcggct
caccttgggt
5041 gaggtagggc tggaggaggc ctctgacacg ggaagcggac ccaggggtca
tcttgaggag
5101 atgtgtgctt gccccctga ctacacaggt gactcatgcc agggttgtcg
ccctggatac
5161 tattgggaca aaaaagctt acctgtagga aggtgtgttc cctgcaattg
caacggacat
5221 tcaaatagat gccaggatgg ctccgggata tgcattaact gtcagcacia
cacagctggg
5281 gagcactgtg agcgttgcca agcaggtcac tatggaaatg ccatccacgg
atcttgtagg
5341 gtctgcccct gccctcatal caacagtttt gccaccggct gtgctgtgga
tggtggagct
5401 gtgaggtgtg cctgcaaacc cggatacaca ggaacacagt gtgagaggtg
tgcaccagga
5461 tattttggga acccccagaa atttgagggt agctgccagc catgcaattg
taacagcaat
5521 ggccagttag gtccttgca cccctaact ggagactgtg taaaccaaga
acccaaagat
5581 ggcagccctg cagaagaatg tgatgactgc gacagctgtg tgatgacgct
cttaaatac
5641 ttggcctcca tgggtgagga actccgcctg gtgaagtcaa agctgcaggg
gctgagtggt
5701 agcacgggtg ctctggaaca gatccggcac atggagacgc aggccaagga
cctgaggaac

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FIG. 2I-2

~~FIG. 2I~~ (CONT)

5761 cagctgcttg gcttccgttc tgccacctca agtcatgggt ccaaaatgga
 tgacctggaa
 5821 aaagagctga gtcatttgaa ccgggaattt gaaactctgc aagaaaaggc
 acaggccaat
 5881 tccagaaaag cacaacatt ^{20/28} atataacaac attgatcaga caatccaaag
 tgccaaagaa
 5941 ctggacatga agattaaaa catcgttcag aatgtgcaca ttctcctgaa
 gcagatggcg
 6001 aggccagggtg gagaaggcac ggacttgcca gtgggtgact ggtccaggga
 gctggccgaa
 6061 gctcaacgca tgatgcgaga cctgcgaagc cgagacttta aaaagcacct
 ccaagaagca
 6121 gaggccgaga aaatggaagc ccagctctta ctgcaccgga tcaggacctg
 gctggaatcc
 6181 caccagggtgg agaacaacgg actgctaaag aatattcggg actccttaaa
 tgattatgaa
 6241 gacaaacttc aggacctacg ttccatcctc caggaggcag ctgccaggc
 aaagcaggcc
 6301 actggcatca accatgaaaa tgaggggggt ctcggagcca tccagagaca
 aatgaaagaa
 6361 atggattccc tgaagaatga cttaccaag tacctggcca cagccgactc
 ttccctgctg
 6421 cagaccaaca atctactgca gcagatggac aaaagccaga aggaatatga
 aagcttagct
 6481 gctgctttaa atggagcaag acaggaactg agtgacagag tgcgagaact
 gtccagatcg
 6541 ggtggcaaag caccgctggt ggtggaggca gagaagcatg cacagtcttt
 acaggagctg
 6601 gcaaagcagc tggaagagat aaagagaaac accagcgggg atgagctggt
 gcgttgctg
 6661 gtggatgctg ccacggccta tgagaacatc ctcaatgcca tcagagcagc
 agaggatgca
 6721 gccagcaagg ccaccagtgc ctccaagtct gccttccaaa cagtgataaa
 ggaagacctt
 6781 ccaaaaagag ctaagaccct gagttctgac agcgaggaac tgtaaataa
 agccaagatg
 6841 acacagaaaa ggctacagca agtcagtcca gctctcaaca gcctacaaca
 aacctgaag
 6901 actgtatcag ttcagaagga cctgctagat gccaacctca ctggtgccc
 tgatgatctt
 6961 catgggatac agagaggtga tatcgacagt gtggtgatcg gtgcaaagag
 catggtcagg
 7021 gaagccaacg gaataacaag cgaggtcctg gacgggctca accccatcca
 gacagatttg

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 FIG. 2I-2

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 FIG. 2I-3

~~FIG. 2I (CONT)~~

7081 ggaaggatta aggacagcta tgagagcgca cggcgtgaag acttcagcaa
ggctctggtc
7141 gatgccaata actcagtaaa gaaattaacc aggaagttgc ctgatctttt
tatcaagatt
7201 gaaagtatca accaacagtt gctgcccctg gggaacatct ctgacaatgt
ggaccgaatc
7261 cgagaactca ttcagcaggc cagagatgct gcaaacaagg tgggtattcc
catttggtc
7321 tag

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FIG. 2I-3

FIG. 2I-3

~~FIG. 2J~~

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MSEGICCRAGALCKSGQQVSTVVVVDPPNHASGMRTCSPPPEHV
HTCIKEPQNQLFHVAYILIKFANSRPDLWILERSVDFGSTYSPWQYFAHSRRDCVEQ
FGQEANMAITQDDQMLCVTEYSRIVPLENGEIVVSLINGRPGAKKFAFSDTLREFTKA
TNIRLRFLRTNTLLGHLISKAERDPTVTRRYCMEADDALFSVLQYYYSIKDISVGGR
CVCNGHAEACSDNPEKQFRCECQHHTCGDTCNRCCAGYNQRRWQPAGQEQHNECEAC
NCHGHA VDCYYPDVEHQASLNSKGVYAGGGVCINCQHNTAGVNCEKCAKGYFRPHG
VPVDALHGCIPCSCDPERADDCDQSGHCHCKPNFSGDYCETCADGYYNFPFCLRIPV
FPNYTPSPEDPVAGNIKGKDPGTLDPPVIANGAYLGASRLEQGATGQGSPAERVHTN
SWLSSSMPLQVRAAIHEAKCYSLCFMYVEHSGTVPPALGSGYTG DSEPKTGTQAKR
GCDCNLEGVLPEICDDRGRCLCRPGVEGPQCDSCRSGSYSFPICQACQCSTIGSY PVP
CDPGNGQCDCLPGITGRQCDRCLSGAYDFPYCQGKEAGSMLEARSSSEWVQLTSWRSL
GYCQCKQHVASPTCSVCKPLYWNLAKENPRGCSECQCHEAGTL SGIGECGQEDGDCSC
KAHVTGDACDTCEDGFFSLEKSNYFGCQGCQCDIGGALTTMC SGPSGVCQCREHVEGK
QCQRPENNYYPDLHMKYEVEDGTGPNGRNLRF GFDPLVFPEFSWRGYAPMTSVQVY
MSECVCPLHCMLEFWGTFQNEVRVRLSVRQSSLSLFRIVLRYISPGTEAISGRITLYSS
QGDS DALQSRKITFPPSKEPAFVTVPGNGFAGPFSITPGTWIACIQVEGVLLDYL VLL

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FIG. 2J

~~FIG. 2J~~ (CONT)

PRDYIEAFTLQVPVTEPCAHTGSPQDNCLLYQHLPLTAFSCTLACEARHFLLDGELRP
LAMRQPTPTHAMVDLSGREVELQLRLRVPQVGHYVVLLEYATEVEQLFVVDVNLKSS
GSALAGQVNIYSCKYSIPCRSVVIDSLRTAVHELLADADIQLKAHMAHFLLYHICII
PAEEFSTEYLRPQVHCIASRQHANSASCVSLAHETPPTASILDATSRGLFSALPHE
PSSPADGVTLKAPQSQVTLKGLIPHLGRHVFIHFYQAEHPGFPTEVIVNGGRQWSGS
FLASFCPHLLGCRDQVISDGQVEFDISEAEVAVTVKIPDGKSLTLVRVLVPAENYDY
QILHKTTVDKSSEFISSCGGDSFYIDPQAASGFCKNSARSLVAFYHNGAIPCECDPAG
TAGHHCSPEGGQCPCRPNVIGRQCSRCATGYYGFPYCKPCNCGRRLCEEVTGKCLCPP
HTVRPQCEVCEMNSFNHFPVAGCDVCNCSRKGTIEAAVSECDRDSGQCRCKPRVTGQQ
CDKCAPGFYQFPECVPCSCNRDGTEPSVCDPETGACMCKENVEGPQCQLCREGSFYLD
PTNPKGCTKCFCFGVNTDCQSSHKQRAKFVDMMGWRLETADGVDVPVSFNPGSNSMVA
DLQELPPSVHSASWVAPPSYLGDKVSSYGGYLYHAKSFGLPGDMVLLGKQPDVQLTG
QHMSLIHKEPSDPRPDLRHHGRVQVIEGNFRHEGSSAPVSREELMTVLSRLRLHIRG
LHFTETQRLTLGEVGLLEEASDTGSGPRAHLVEMCACPPDYTGDSQGCRPGYYWDNKS
LPVGRCVPCNCGHNSNRCQDGSIGICINCQHNTAGEHCERCQAGHYGNAIHGSCRVCPC
PHTNSFATGCAVDGGAVRCACKPGYTGTQCERCAPGYFGNPQKFGGSCQPCNCSNGQ
LGPCDPLTGDCVNQEPKDGSPAEECDDCDSCVMTLLNDLASMGEELRLVKSKLQGLSV
STGALEQIRHMETQAKDLRNQLLGFRSATSSHGSKMDDLEKELSHLNREFETLQEKAQ
VNSRKAQTLYNNIDQTIQSAKELDMKIKNIVQNVHILLKQMARPGGEGTDLPGDWSR
ELAEAQRMMRDLRSRDFKKHLQEAEAEKMEAQLLLHRI RTWLESHQVENNGLLKNIRD
SLNDYEDKLQDLRSILQEAAAQAKQATGINHENEGVLGAIQRQMKEMDSLKNDFTKYL
ATADSSLLQTNLLQQMDKSQKEYESLAAALNGARQELSDRVRELSRSGGKAPLVVEA

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FIG. 2J

~~FIG. 2J (CONT)~~

EKHAQSLQELAKQLEEIKRNTSGDELVRCAVDAATAYENILNAIRAAEDAASKATSAS
KSAFQTVIKEDLPKRAKTLSSDSEELLNEAKMTQKRLQQVSPALNSLQOTLKT VSVQK
DLLDANLTVARDDLHGIQRGDIDSVVIGAKSMVREANGITSEVLDGLNPIQTDLGRIK
DSYESARREDFSKALVDANNSVKKLTRKLPDLFIKIESINQQLPLGNISDNVDRIRE
LIQQARDAANKVGIPWL"

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FIG. 2J

FIG. 2J

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CSPLPKTQANHGAHQFGDIPTSHLLFKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNSFMAL
YLSKGRVLFALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRVVDGLRAREGSLPGNSTIS
IRAPVYLGSPSPSGPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFVSSCLGGPLEKGIYFSEEG
GHVVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHLVCVYLEAGKVTASMDSGAGGTSTS
VTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPFASTQEPLHLGGAPANLTTLRI
PVWKSFFGCLRNIHVNIHVPVTEALEVQGPVSLNGCPDQ

FIG.-3A

t gctcaccact tcccaagacc caggccaatc atggagccct ccagtttggg
gacattccca ccagccactt gctattcaag cttcctcagg agctgctgaa
accaggtca cagtttgctg tggacatgca gacaacatcc tccagaggac
tggtgtttca cacgggcact aagaactcct ttatggctct ttatctttca
aaaggacgtc tggctcttgc actggggaca gatgggaaaa aattgaggat
caaaagcaag gagaaatgca atgatgggaa atggcacacg gtgggtgtttg
gccatgatgg ggaaaagggg cgcttggttg tggatggact gagggcccg
gaggaagtt tgcctggaaa ctccaccatc agcatcagag cgccagttta
cctgggatca cctccatcag ggaaaccaa gagcctcccc acaaacagct
ttgtgggatg cctgaagaac tttcagctgg attcaaaacc cttgtatacc
ccttcttcaa gcttcggggt gtcttctcgc ttgggtgggc ctttgagaa
aggcatttat ttctctgaag aaggaggtca tgtcgtcttg gctcactctg
tattgttggg gccagaattt aagcttggtt tcagcatccg cccaagaagt
ctcactggga tcctaataca catcggaagt cagcccggga agcacttatg
tgtttacctg gaggcaggaa aggtcacggc ctctatggac agtggggcag
gtgggacctc aacgtcggtc acaccaaagc agtctctgtg tgatggacag
tggcactcgg tggcagtcac cataaaacaa cacatcctgc acctggaact
ggacacagac agtagctaca cagctggaca gatccccctc ccacctgcca
gcactcaaga gccactacac cttggaggtg ctccagccaa tttgacgaca
ctgaggatcc ctgtgtggaa atcattcttt ggctgtctga ggaatattca
tgtcaatcac atccctgtcc ctgtcactga agccttgga gtccaggggc
ctgtcagtct gaatggttg cctgaccagt aaccaagcc tatttcacag
caaggaaatt caccttcaa agcactgatt acccaatgca cctccctccc
cagctcgaga tcattcttca attaggacac aaaccagaca ggtttaatag
cgaatctaatt tttgaattct gaccatggat acccatcact ttggcattca
gtgctacatg tgtattttat ataaaaatcc catttcttga agataaaaaa
attgttattc aaattgttat gcacagaatg tttttggtaa tattaatttc
cactaaaaaa ttaaatgtct

FIG.3B

CLGGPLEKGIYFSEEGGHVVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHLVCVYLEAG
KVTASMDSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPFASTQE
PLHLGGAPANLTTLRIPVWKSFFGCLRNIHVNIHVPVTEALEVQGPVSLNGCPDQ

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FIG._3C

tgc ttgggtgggc ctttggagaa aggcatttat ttctctgaag aaggaggtca
tgtcgtcttg gctcactctg tattgttggg gccagaattt aagcttggtt
tcagcatccg cccaagaagt ctactggga tcctaataca catcggaagt
cagcccggga agcacttatg tgtttacctg gaggcaggaa aggtcacggc
ctctatggac agtggggcag gtgggacctc aacgtcggtc acaccaaagc
agtctctgtg tgatggacag tggcactcgg tggcagtcac cataaaacaa
cacatcctgc acctggaact ggacacagac agtagctaca cagctggaca
gatccccctc ccacctgcca gcactcaaga gccactacac cttggagggtg
ctccagccaa tttgacgaca ctgaggatcc ctgtgtggaa atcattcttt
ggctgtctga ggaatattca tgtcaatcac atccctgtcc ctgtcactga
agccttgga gtcaggggc ctgtcagctc gaatggttgt cctgaccagt
aaccaagcc tatttcacag caaggaaatt caccttcaa agcactgatt
acccaatgca cctccctccc cagctcgaga tcattcttca attaggacac
aaaccagaca ggtttaatag cgaatctaatt tttgaattct gaccatggat
acccatcact ttggcattca gtgctacatg tgtattttat ataaaaatcc
catttcttga agataaaaaa attgttattc aaattgttat gcacagaatg
tttttggtaa tattaatttc cactaaaaaa ttaaattgtc

FIG._3D

PLPKTQANHGA

FIG._3E

cact tcccaagacc caggccaatc atggagc

FIG._3F

SHLLFKLPQELLKPRS

FIG._3G

gccactt gctattcaag cttcctcagg agctgctgaa acccagggtca

FIG._3H

TSSRGLVFHTGKNSFMALYLSKGRLV^{24/28}FALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRL
VVDGLRAREGSLPGNSTISIRAPVYLGSPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFG
VSS

FIG._3I

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page

gacaacatcc tccagaggac tgggtgtttca cacggggcact aagaactcct
 ttatggctct ttatctttca aaaggacgtc tgggtctttgc actggggaca
 gatgggaaaa aattgaggat caaaagcaag gagaaatgca atgatgggaa
 atggcacacg gtggtgtttg gccatgatgg ggaaaagggg cgcttggttg
 tggatggact gagggcccgg gaggggaagt tgcctggaaa ctccaccatc
 agcatcagag cgccagttta cctgggatca cctccatcag ggaaaccaa
 gagcctcccc acaaacagct ttgtgggatg cctgaagaac tttcagctgg
 attcaaaacc cttgtatacc ctttcttcaa gcttcggggg gtcttctc

FIG._3J

TSSRGLVFHTGTKNSFMALYLSKGRLVFALGTDGKKLRIKSKEKCNDGKWHTTVVFGHDGEKGRL
 VVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFG
 VSSCLGGPLEKGIYFSEEGGHVVLHSHVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYL
 EAGKVTASMDSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPAS
 TQEPLHLGGAPANLTTLRIPVWKSFFGCLRNIHVNIHVPVTEALEVQGPVSLNGCPDQ

FIG._3K

catcc tccagaggac tgggtgtttca cacggggcact aagaactcct ttatggctct
 ttatctttca aaaggacgtc tgggtctttgc actggggaca gatgggaaaa
 aattgaggat caaaagcaag gagaaatgca atgatgggaa atggcacacg
 gtggtgtttg gccatgatgg ggaaaagggg cgcttggttg tggatggact
 gagggcccgg gaggggaagt tgcctggaaa ctccaccatc agcatcagag
 cgccagttta cctgggatca cctccatcag ggaaaccaa gagcctcccc
 acaaacagct ttgtgggatg cctgaagaac tttcagctgg attcaaaacc
 cttgtatacc ctttcttcaa gcttcggggg gtcttctgc ttgggtgggc
 ctttgagaa aggcatttat ttctctgaag aaggagggtca tgcgtcttg
 gctcactctg tattgttggg gccagaattt aagcttggtt tcagcatccg
 cccaagaagt ctactggga tcctaataca catcggaagt cagcccggga
 agcacttatg tgtttacctg gaggcaggaa aggtcacggc ctctatggac
 agtggggcag gtgggacctc aacgtcgggc acaccaaagc agtctctgtg
 tgatggacag tggcactcgg tggcagtcac cataaaacaa cacatcctgc
 acctggaact ggacacagac agtagctaca cagctggaca gatccccctc
 ccacctgcca gactcaaga gccactacac cttggagggtg ctccagccaa
 tttgacgaca ctgaggatcc ctgtgtggaa atcattcttt ggctgtctga
 ggaatattca tgtcaatcac atccctgtcc ctgtcactga agccttgga
 gtccaggggc ctgtcagctc gaatggttg

FIG._3L

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FKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASMDSGAGGTSTSVTPKQSLCDGQWHS
 VAVTIKQHILHLELDTDSSYTAGQIPFPASTQEPLHLGGAPANLTTLRIPVWKSFFGCLRNIH
 VNHI PVPVTEALEVQGPVSLNGCPDQ

FIG._3M

on
next
page

tt aagcttgttt tcagcatccg cccaagaagt ctactggga tcctaataca
catcggaagt cagcccgga agcacttatg tgtttacctg gaggcaggaa
aggtcacggc ctctatggac agtggggcag gtgggacctc aacgtcggtc
acaccaaagc agtctctgtg tgatggacag tggcactcgg tggcagtcac
cataaaacaa cacatcctgc acctggaact ggacacagac agtagctaca
cagctggaca gatccccttc ccacctgcca gcactcaaga gccactacac
cttggagggtg ctccagccaa tttagcgaca ctgaggatcc ctgtgtggaa
atcattcttt ggctgtctga ggaatattca tgtcaatcac atccctgtcc
ctgtcactga agccttgga gtccaggggc ctgtcagtct gaatggttgt
cctgaccagt

FIG._3N

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~~FIG. 4~~

human
skin



human
SCC



mammalian Tollloid

laminin 5

FIG. 4

Figure is oriented as landscaped.

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~~FIG. 5~~

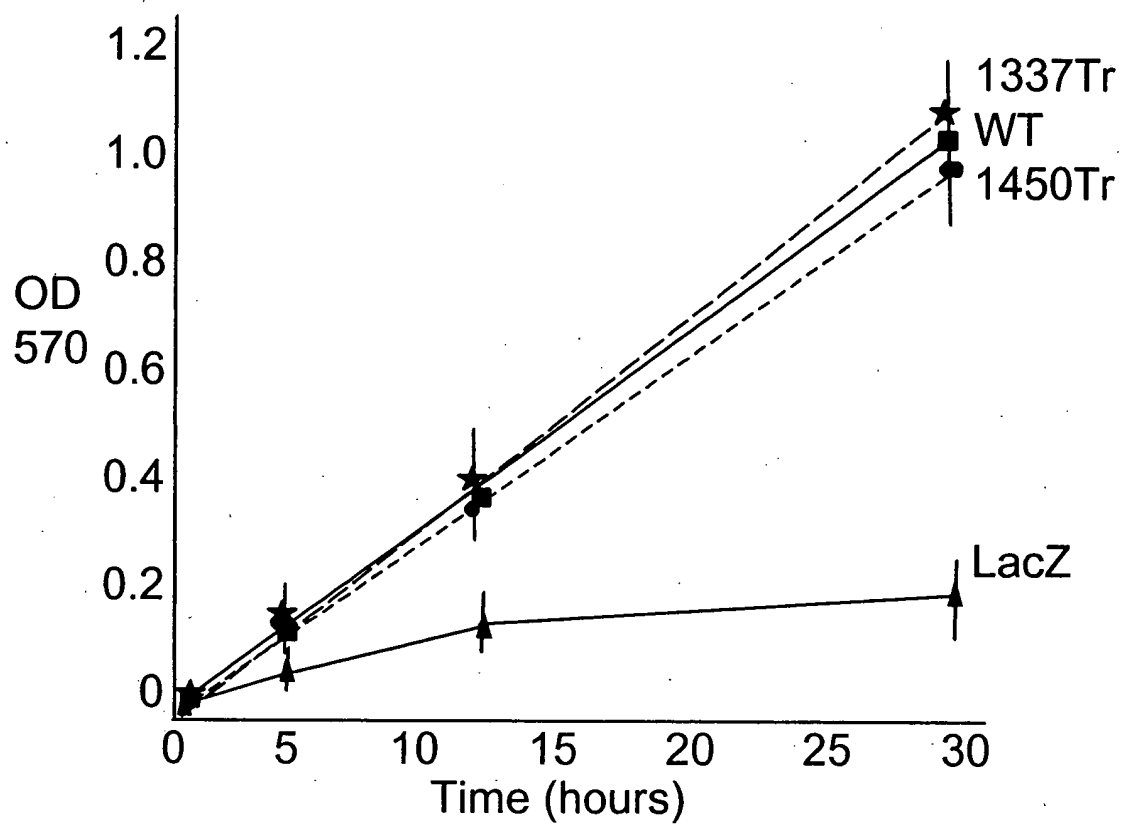


FIG. 5

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FIG. 6

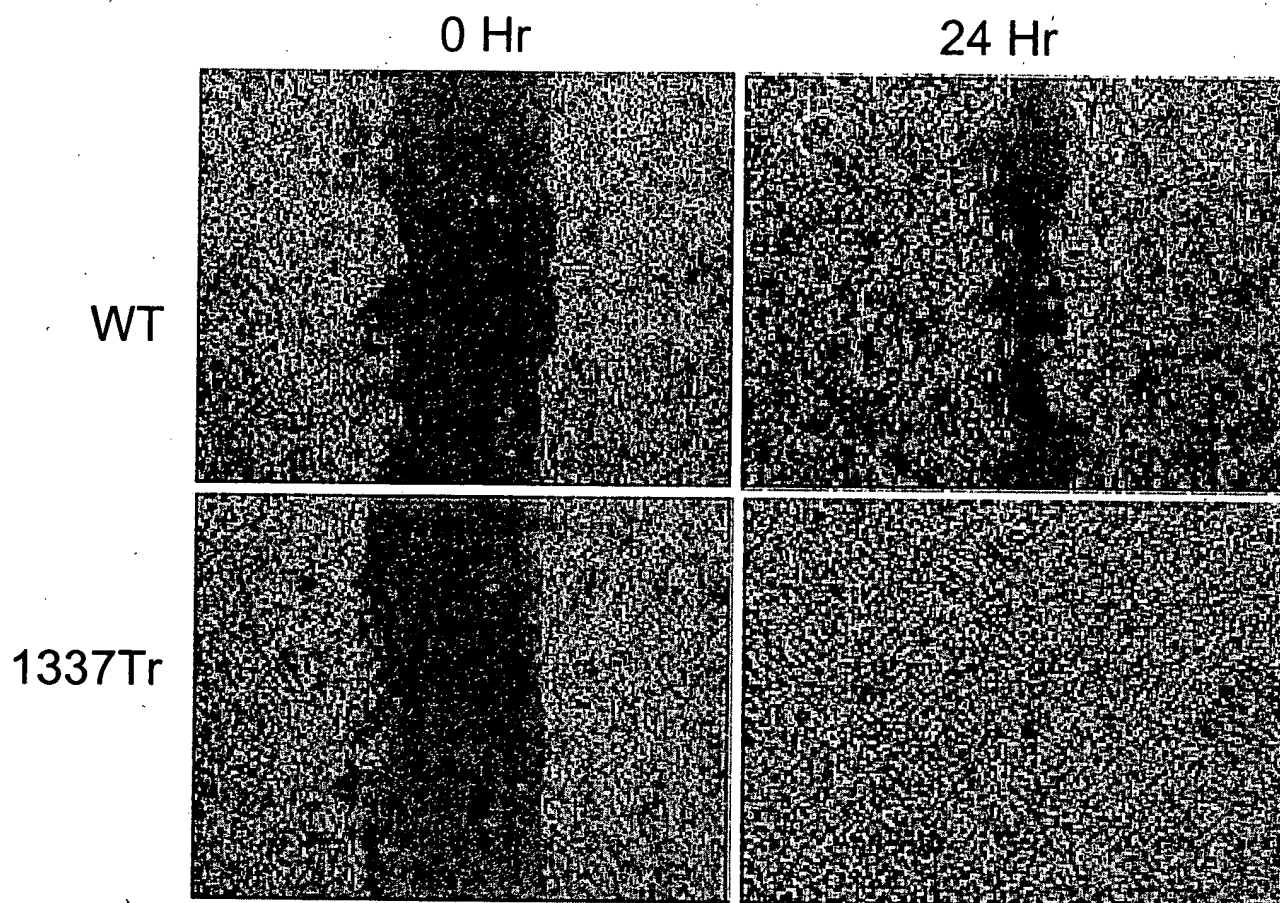


FIG. -6

FIG. -7 appears here

FIG. -7

FIG. 7

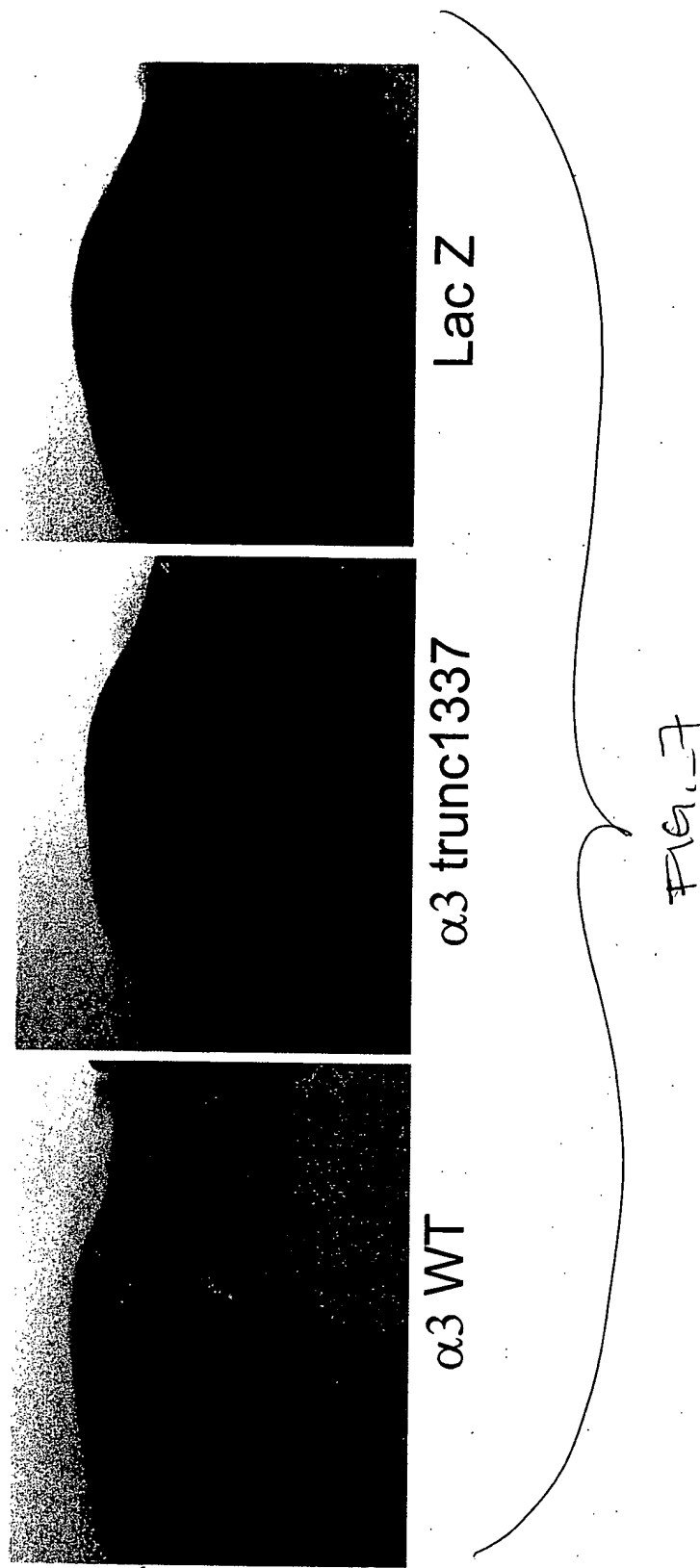


FIG. 7 now appears on same page as FIG. -b.

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